

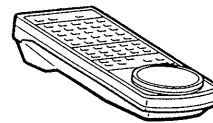
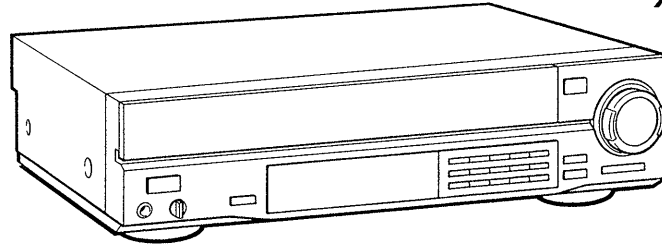
MDP-333/533D

RMT-333E

SERVICE MANUAL

AEP Model
Australian Model

MDP-533D
MDP-333



The MDP-333/533D video disc player is very similar to MDP-315/515D. This manual only contains the difference between MDP-315/515D and MDP-333/533D. Please refer to the MDP-315/515D service manual.

SPECIFICATIONS

Type CD/CDV/LD Player
Signal readout Optical (Laser beam reflection)
Signal format CCIR standard, PAL colour system
EIA standard, NTSC colour system
(MDP-533D)

Playing time

			PAL	NTSC MDP-533D
LD	CAV	30 cm (12 in) double-sided	72	60
		20 cm (8 in) double-sided	32	28
		20 cm (8 in) single-sided	-	14
	CLV	30 cm (12 in) double-sided	120	120
		20 cm (8 in) double-sided	40	40
		20 cm (8 in) single-sided	-	20
CDV	Audio portion	20	20	
	Video portion	6	5	
CD	12 cm (5 in) single-sided	74	74	
	8 cm (3 in) single-sided	20	20	

(minutes)

Digital audio specifications

Frequency response 4 Hz to 20 kHz (± 0.3 dB)
Signal-to-noise ratio More than 100 dB (EIAJ*)
Dynamic range More than 95 dB (EIAJ*)
Total harmonic distortion 0.003% or less (EIAJ* at 1 kHz)
Channel separation More than 90 dB (EIAJ* at 1 kHz)
Wow and flutter Below measurement limit
($\pm 0.001\%$ W.PEAK) (EIAJ*)
* Measurement by under condition of standards of Electric Industries Association of JAPAN (VTC-015)
Horizontal video resolution
PAL 440 lines
NTSC 425 lines

Input/output

Video output 1.0 Vp-p, 75 ohms, unbalanced
RGB output 0.7 Vp-p
Audio output Analog: 200 mVrms (1 kHz, 40% modulation)
Digital: 200 mVrms (1 kHz, -20 dB)
Audio digital output (optical)
-18 dBm, wavelength 660 nm
Headphone output 28 mW (32 ohms), 8 ohms

- Continued on next page -

CD VIDEO CD CDV LD PLAYER
SONY®

Power requirements

Model for Continental Europe:
220 V AC, 50/60 Hz
Model for the United Kingdom and
Australia:
240 V AC, 50/60 Hz

Power consumption

40 watts

Weight Approx. 8.4 kg (18 lb 7 oz)

Dimensions Approx. 430×115×420 mm (w/h/d)
(17×4½×17 inches)

Operating temperature

+5°C to +35°C

Ambient humidity 5% to 90%

Remote Commander RMT-333E

Remote control system

Infrared control

Power requirements

3 V DC, (2 IEC R6 (size AA) batteries)

Dimensions Approx. 62×44.5×185 mm (w/h/d)
(2⅞×1⅓×7⅜ inches)

Weight Approx. 170 g (including batteries)
(6 oz)

Supplied accessories

Remote Commander RMT-333E (1)

IEC R6 (size AA) batteries (2)

Design and specifications are subject to change without
notice.

Remote commander RMT-333E is supplied as a
unit for service. Don't supply individual parts
except for the battery case lid.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK
⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED
VIEWS AND IN THE PARTS LIST ARE CRITICAL TO
SAFE OPERATION. REPLACE THESE COMPONENTS
WITH SONY PARTS WHOSE PART NUMBERS APPEAR
AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS
PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS
THAT ARE CRITICAL TO SAFE OPERATION ARE
IDENTIFIED IN THIS MANUAL. FOLLOW THESE PRO-
CEDURES WHENEVER CRITICAL COMPONENTS ARE
REPLACED OR IMPROPER OPERATION IS SUSPECTED.

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PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING !!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 25 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

1. Laser Diode Properties

- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

DANGER

Invisible laser radiations when open and interlock failed or defeated.
Avoid direct exposure to beam.

CLASS I LASER PRODUCT

ADVARSEL:

USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UD AF FUNCTION UNDGÅ. UDSAETTELSE FOR STRÅLING.

CLASS 3B LASER

VAROITUS!

SUOJAKOTELOA EI SAA AVATA. LAITE SISÄLTÄÄ LASERDIODIN, JOKA LÄHETTÄÄ (NÄKYMÄTÖNTÄ) SILMILLE VAAKALLISTA LASERSÄTEILYÄ.

LASER COMPONENT IN PRODUCT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR CLASS I.

SAFETY CHECK-OUT

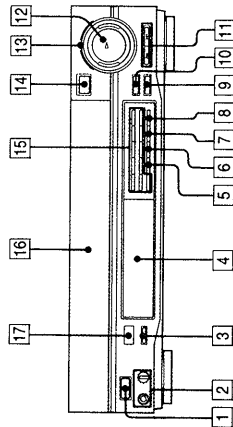
After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

Location and Function of Parts and Controls

Refer to the page indicated in the black circle for details.

A-1

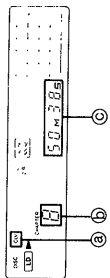


A-1

Buttons on the Remote Commander have the same functions as those on the main unit.

- 1 **Power switch**
Press to turn on and press again to turn off the player.
- 2 **PHONES jack (stereo phone type) and LEVEL control**
When listening with headphones, connect the headphones with stereo phone plug here. Adjust the volume with the LEVEL control.
- 3 **RGB selector (MDP-533D)**
When the player is connected to the TV via the EUROCONNECTOR, set to ON to view an NTSC disc on a PAL TV. The TV can be set to receive the RGB signal.
When your TV is equipped with the RGB or composite signal selector, setting the TV to receive the RGB signal may be performed on the TV itself.
Set to OFF when your TV is capable of receiving both PAL and NTSC.

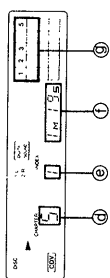
A-2



A-2

- When the TV is set to the RGB mode, the picture brightness may change.
- In this case, adjust the brightness on the TV.
- When this selector is set to ON, the picture may shift slightly to the left.

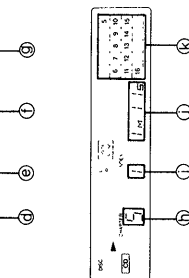
A-3



A-3

- 3 **Repeat button (MDP-333)**
Press to repeat the entire disc side.

A-4



A-4

- 4 **Display window**
When playing back a disc, the following indications appear on the display.

A-2

- LD
 - a Type of LD
 - b Chapter number
 - c Time (hr./min./sec.) or frame number

A-3

- CDV
 - d Track number
 - e Index
 - f Elapsed time (min./sec.) for track
 - g AV calendar

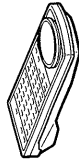
A-4

- CD
 - h Track number
 - i Index
 - j Elapsed time (min./sec.) for track
 - k AV calendar

Front Panel

Accessories

The following accessories are included in the carton.



RMT-333E Remote Commander

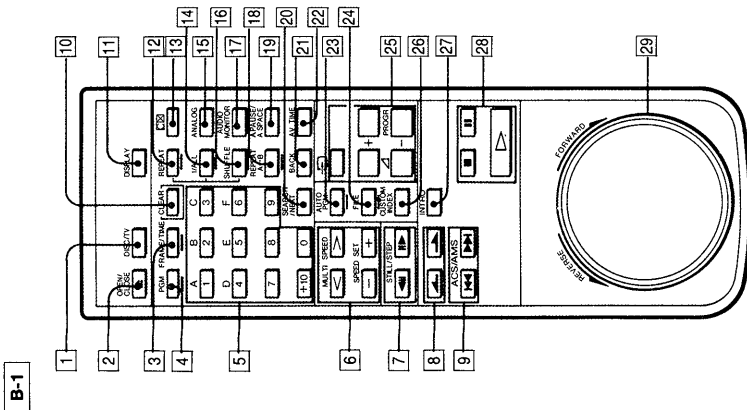


Two IEC R6 (size AA) batteries

- 5 **AUTO PGM button**
- 6 **AV TIME button**
Press to change time display.
- 7 **FILE button**
Use this button for setting a custom index mark.
- 8 **CUSTOM INDEX button**
Use this button for custom index search.
- 9 **Stop button**
- 10 **Pause button**
- 11 **ACS/AMS (Automatic Chapter Select/Music Sensor) buttons**
Use these buttons for skipping chapter/track.
- 12 **Play button**
- 13 **Shuttle ring**
Utilize for forward or reverse speed scan.
- 14 **Disc tray OPEN/CLOSE button**
Press to open or close the disc tray.
- 15 **Number/file search (1-9/A-F) buttons**
These are used for entering program, chapter, track, frame, time numbers and File A-F.
- 16 **Disc tray**
- 17 **Remote control sensor**
Point the supplied Remote Commander here.

Location and Function of Parts and Controls

Remote Commander



The yellow bar under a button indicates that the function of that button can be released by pressing the CLEAR button.

- B-1** Buttons on the Remote Commander have the same functions as those on the main unit.
- DISC/TV button ①**
When the player is connected to the TV via the EUROCONNECTOR, press to monitor TV programmers. Press again to return to disc viewing.
 - Disc tray OPEN/CLOSE button ②**
Press to open or close the disc tray.
 - FRAME/TIME search button ③**
 - PGM (program play) button ④**
 - Number/file search (1-9/A-F) buttons ⑤**
These are used for entering program, chapter, track, frame, time numbers and File A-F.
 - </> MULTI SPEED buttons ⑥**
+/- SPEED SET buttons ⑦
 - ◀|||▶ STILL/STEP buttons ⑧**
 - ↔ Index buttons ⑨**
While playing back a CD, press → to advance the index, or ← to revert it.
 - ⏏ ACS/AMS (Automatic Chapter Select/Music Sensor) buttons ⑩ ⑪ ⑫**
 - CLEAR button ⑩**
Press to cancel a wrong numerical entry or to terminate the search or other function currently in operation. (The functions affected are marked on the Remote Commander with yellow underlines.)
 - DISPLAY button ⑪**
Press during playback to superimpose the screen messages (see page 13) on the monitor screen. Press again to remove the message.
 - REPEAT button ⑫**
Press to repeat the entire disc side, and for other repeat play.
 - CXI button ⑬**
Press to manually activate the [CX] noise reduction system.

- 1/ALL button ⑭**
Press to repeat the single track or chapter.
- ANALOG audio button ⑮**
Use this button to switch between digital and analog sound on an LD or NTSC video signal system.
• This button is not used for the MDP-333 as this unit automatically distinguishes digital and analog sound.
- SHUFFLE button ⑯**
Press to play back selections on a CD, CDV, and LD with TOC in random order.
- AUDIO MONITOR button ⑰**
Press to switch the audio channels of a disc in the order of stereo, 1/L, and 2/R.
- REPEAT A ↔ B button ⑱**
Press to repeat the particular portion.
- A/(Automatic) PAUSE/A. (Automatic) SPACE button ⑲**
- SEARCH/NEXT button ⑳ ㉑ ㉒**
- BACK button ㉑**
- AV TIME button ㉒**
Press to change time display.
- AUTO PGM button ㉓**
- FILE button ㉔**
Use this button for setting a custom index mark.
- TV operation buttons ㉕**
(Can be used to control Sony TV sets bearing the [TV] mark.)
PROGR. (program) +/- buttons
↔ (volume) +/- buttons
⏏ button
Press to switch to a video equipment connected to the video/audio inputs of the TV set. (This function is available only with certain TV models.)
- CUSTOM INDEX button ㉖**
Use this button for custom index search.
- INTRO (introduction) scan button ㉗**
- Basic operation buttons ㉘**
■ STOP button
⏏ PAUSE button
▶ PLAY button
- Shuttle ring ㉙ ㉚**
Utilize for forward or reverse speed scan.

Precaution on the Remote Commander

Do not let strong sunlight or a strong artificial light source shine directly on the remote sensor, as it may interfere with the operation or damage the sensor.

Installing batteries

- Open the lid.
- Insert the two IEC R6 (size AA) batteries with correct polarity.

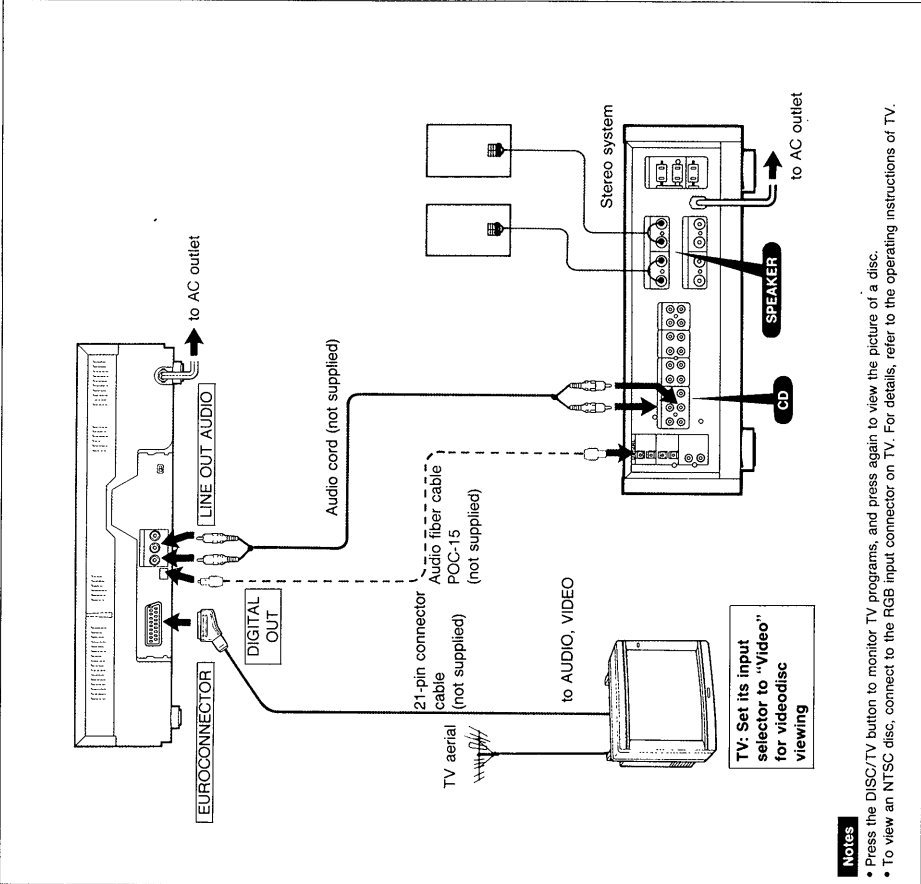
Battery life

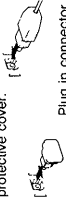

Batteries should last for about six months under normal operating conditions. When the operating range of the Remote Commander becomes noticeably short, replace the batteries with new ones.

Note

When the Remote Commander is not to be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.

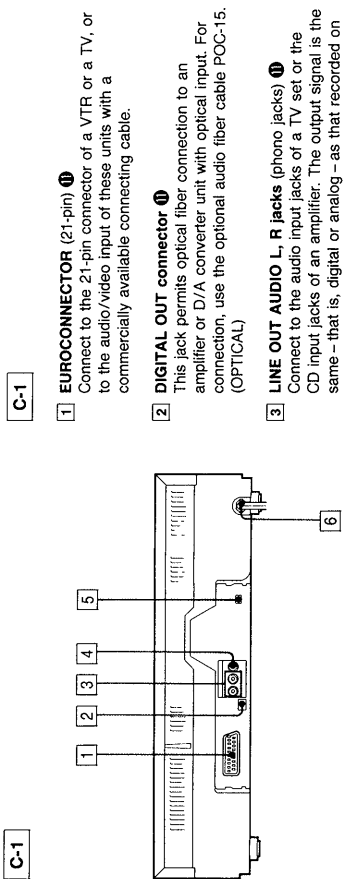
To Connect to Audio System and to TV with Audio/Video Inputs and EUROCONNECTOR



- Notes**
- Press the DISC/TV button to monitor TV programs, and press again to view the picture of a disc.
 - To view an NTSC disc, connect to the RGB input connector on TV. For details, refer to the operating instructions of TV.
- Connection precautions**
- Make sure that all equipment is OFF before connecting or disconnecting any cables.
 - Check the colour of the plugs: yellow indicates video; white, left audio channel; red, right audio channel.
 - Firmly insert the plugs into the jacks. A loose connection can lead to noise.
 - When unplugging a cable, grasp the plug. Never pull by the cable.
 - To prevent interference, turn off all equipment that is connected, but not currently in use.
- Connection of optical fiber cable**
- Remove protective cover.  Plug in connector firmly. 

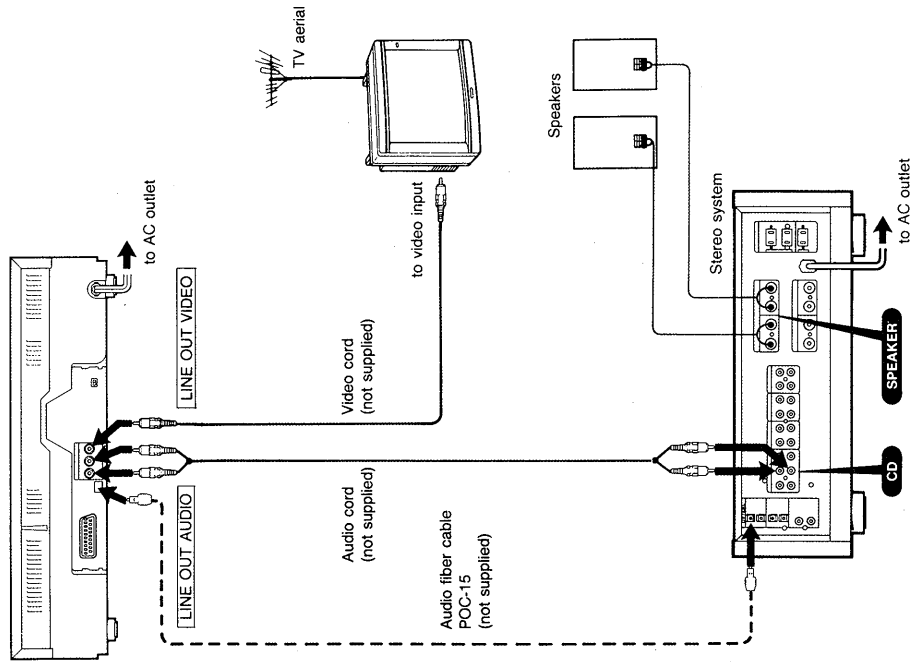
Location and Function of Parts and Controls

Rear Panel



- C-1**
- 1 EUROCONNECTOR (21-pin)** ①
Connect to the 21-pin connector of a VTR or a TV, or to the audio/video input of these units with a commercially available connecting cable.
 - 2 DIGITAL OUT connector** ①
This jack permits optical fiber connection to an amplifier or D/A converter unit with optical input. For connection, use the optional audio fiber cable POC-15. (OPTICAL)
 - 3 LINE OUT AUDIO L, R jacks (phono jacks)** ①
Connect to the audio input jacks of a TV set or the CD input jacks of an amplifier. The output signal is the same - that is, digital or analog - as that recorded on the disc.
 - 4 LINE OUT VIDEO jack (phono jack)** ①
Connect to the video input jack of a TV set or a VTR.
 - 5 REPEAT switch (MDP-533D)**
Select ON to repeat the entire disc side.
 - 6 AC power cord**

To Connect to Audio System and TV with Audio/Video Inputs

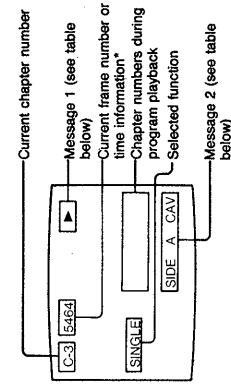


Note
When playing an NTSC disc, the picture may be abnormal on some types of TV.

Screen Messages

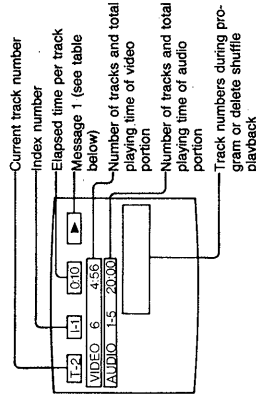
Information on the operating condition of the unit and chapter or track numbers can be superimposed on the TV or monitor screen. While no image is displayed, such as during search, information while playing back a PAL disc and a CD is shown on a blue background and information while playing back an NTSC disc is shown on a green background.

LD

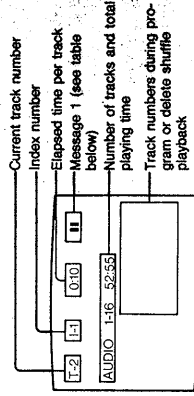


* If seconds are not recorded on the disc, only "0:22" is shown.

CDV

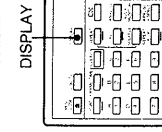


CD



To turn on the screen message

Press DISPLAY button.



Press the button again to turn the message off.

Message 1

Display	Explanation
OPEN	Disc tray open
CLOSE	Disc tray close
▶	Playback
■	Stop
	Pause
⏮	Forward/reverse speed scan
SEARCH	Search
▶ X 1/2	1/2 speed display in forward direction

(Examples)

Message 2

Display	Explanation
SIDE A CAV	Standard-play disc side A
SIDE B CAV	Standard-play disc side B
SIDE A CLV	Extended-play disc side A
SIDE B CLV	Extended-play disc side B
1/L	Main soundtrack/left channel
2/R	Second soundtrack/right channel
▷ DIGITAL	Digital sound
▷ ANALOG	Analog sound

(Examples)

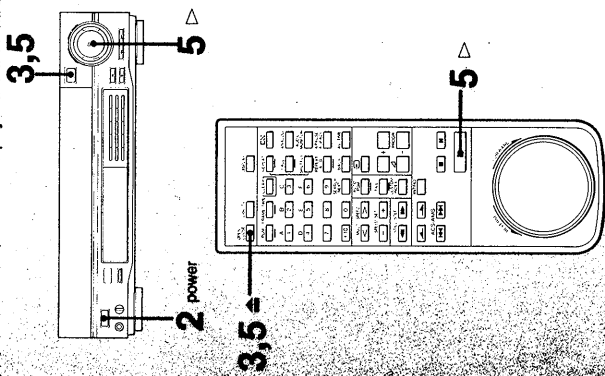
LD precaution

Some discs do not contain the side A or B identification code. In this case, the disc side indication may not be correct.

To Play a Disc

Starting Playback

To play an NTSC disc, connect the player and a TV via EUROCONNECTOR.



Notes on disc tray

Insert only one disc at a time. Be sure that the disc is placed properly in the tray. Incorrect placement may result in permanent damage to the disc.

Using an optional timer

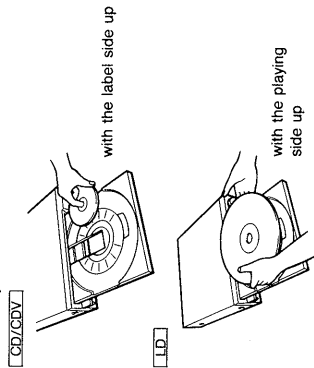
To automatically start playback with an optional timer, leave the POWER switch of the disc player in the depressed position. When the timer supplies power at the preset time, the unit turns on and playback starts.

To pause at the beginning of a disc

Press **II** on the player or the Remote Commander. The tray closes, and the player pauses at the beginning of the disc.

- Turn on the TV and stereo system.
TV: Select the video input. (See page 11.)
Stereo system: Turn on the amplifier or the receiver and select the proper audio input.
- Press POWER to turn on the player.
- Press **OPEN/CLOSE** to open the disc tray.

- Place the disc on the tray.
Place the disc on the center of the tray. If the disc is not placed correctly, playback may not start.



- Press **OPEN/CLOSE** or **▷** (play) to start playback.
CDV: Playback starts from the video portion.

AV calendar

When playing a CD, CDV, or an LD containing TOC (Table of Contents) data, the AV calendar shows information on the total number of tracks or chapters. As tracks or chapters are played, the corresponding numbers on the display go out.

Advanced Playback

To stop playback
Press **■** (stop).
To restart playback from the beginning of the disc, press **▷**.

To stop playback and remove the disc
Press **OPEN/CLOSE**.
Remove the disc and press **OPEN/CLOSE** to close the tray.

To play a stereo or a second audio program (SAP) LD

Reproduced sound	Stereo disc	Stereo	After playback has started	Press AUDIO MONITOR.	Press AUDIO MONITOR.
	SAP disc	Audio signal (1) (left channel) Audio signal (2) (right channel)		Press AUDIO MONITOR.	Press AUDIO MONITOR.
Indicators lit		1/L 2/R		1/L	2/R

Discs with CX Label
Discs bearing the CX label are recorded with the CX noise reduction system, which gives lower noise levels and higher dynamic range. The CX indication should automatically light up. Some CX discs do not include the code necessary to automatically activate the player's CX noise reduction system. If the CX indication does not light, press the CX button on the Remote Commander to manually activate the system.

To switch between digital and analog sound on an LD (for NTSC discs only)

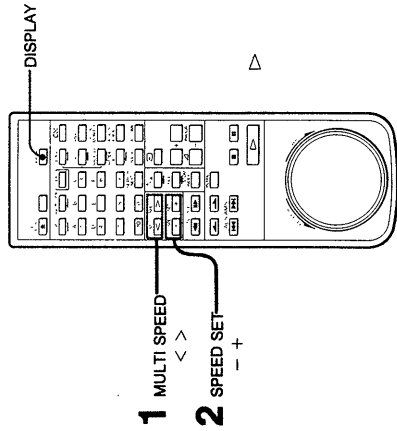
If the LD contains a digital stereo sound signal, the player automatically sends that to the output jacks. Pressing the ANALOG button on the Remote Commander switches to the analog audio signal and turns the DIGITAL SOUND indicator off. Press the ANALOG button a second time to return to digital sound output. With certain discs, there may be a difference in volume between the digital and the analog sound.

To temporarily interrupt playback

Press **II** (pause).
When playing CAV discs, the sound is cut off and a still picture is shown.

When playing other discs, the unit enters the pause condition. To resume play from the same point, press **▷**.

To Change Playback Speed and Direction - Speed Play (CAV Standard-paly)



- 1 MULTI SPEED < >
- 2 SPEED SET - +

To change the speed

- 1 Select the playback direction.
Press > for the forward direction.
Press < for the reverse direction.
- 2 Select the playback speed.
Press + to increase speed.
Press - to reduce speed.

Speed indication	Speed (approx.)
X10	10 times normal speed
X5	5 times normal speed
X3	3 times normal speed
X2	2 times normal speed
X1	Normal speed
X1/2	1/2 normal speed
X1/4	1/4 normal speed
X1/8	1/8 normal speed
X1/16	1/16 normal speed
X1/30	1/30 normal speed
X1/90	1/90 normal speed

Press Δ to resume normal playback.

To change the direction

Press < to view the picture in reverse direction, or Press > to view in forward direction.
To resume normal playback, press Δ .

To display the speed and direction

Press DISPLAY.
The selected direction (< or >) and speed are shown.

Sound during speed play

The sound can be heard only during X1 (normal) speed play in the forward direction. In other speed and direction combinations, the sound is muted.

CLV discs

The above functions are available only with CAV discs. If they are attempted with CLV discs, a three-second warning message, SIDE A CLV or SIDE B CLV, will appear on the screen.

PAL discs

The image may be in black and white during X10 (10 times) speed play in both directions.

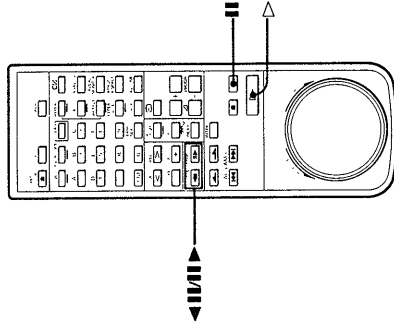
Discs with automatic picture stop function

When a picture stop code is encountered during playback at the normal speed or slower than the normal speed, playback stops at that frame. Press Δ to resume playback or a speed play button to continue the speed play.

To Play Frame by Frame - Step Playback (CAV standard-paly)

To view a still picture
Press **II** (Pause).
The picture stops at the current frame.
To resume normal playback, press Δ .

To view one frame at a time - step playback
Press **II** (pause) once for freeze-frame.
To advance the picture by one frame, press **II** (STEP in forward).
To go back by one frame, press **II** (STEP in reverse).
Hold the button down for continuous frame by frame viewing.
To resume normal playback, press Δ .



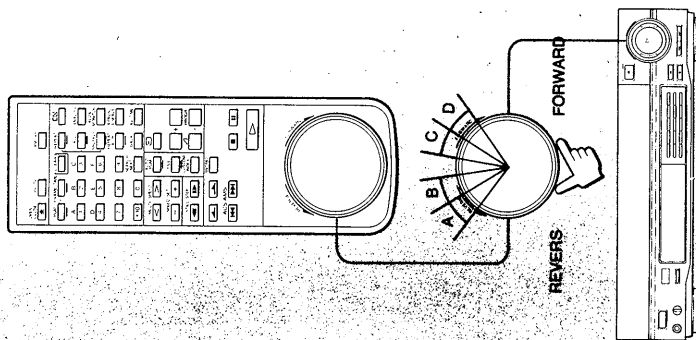
During step playback operation

The sound is muted during step playback.

To Search for a Particular Scene

Dual Speed Scan

The playback speed can be changed depending on the angle of turning the shuttle ring.



Normal Scan

Reverse scan: Turn the shuttle ring to the B position.
Forward scan: Turn the shuttle ring to the C position.
Scans in the speed of approximately 10 times normal speed.

High-speed scan

Reverse scan: Turn the shuttle ring to the A position.
Forward scan: Turn the shuttle ring to the D position.
Scans in the speed of approximately 30 times normal speed.

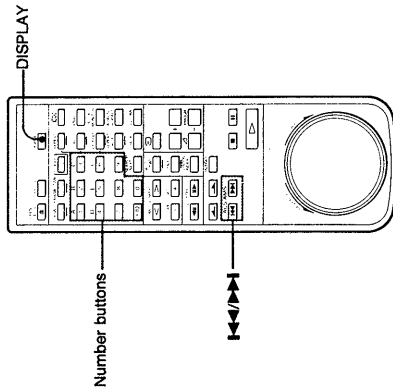
- To resume the normal play, release your finger from the shuttle ring.

While scanning in either direction

- The sound is muted.
- The image with a CLV disc will be in black and white with some instability.
- Scanning speed varies according to the position on the CLV disc.
- The image with a CAV discs will be in black and white on some TV.
- A certain amount of noise is inevitable with all scanning operations. Especially, the image of CAV discs may be a little noisy.

Chapter/Track Search

Some LDs are divided into sections called chapters. The selections on CDs and CDVs are called tracks. Chapters and tracks are assigned numbers and this information is usually indicated on the disc jacket or label.



Direct chapter or track search

Enter the desired chapter or track number by pressing the number buttons.
If you have pressed a wrong number, simply press the correct one.
Playback automatically starts from the designated chapter or track.

Chapter or track skip search

To advance to the beginning of successive chapters/tracks, press **▶▶** repeatedly as needed.
To return to the beginning of the current chapter/track, press **◀◀** once. Press it repeatedly - before the picture reappears - to go to the beginning of previous chapters/tracks.

To check the current chapter/track and frame/time numbers
The numbers are shown in the display window of the player.
Press DISPLAY to display them on the screen.

To enter a number greater than 10

Use the +10 and "0" buttons.

Example: To enter 14 \rightarrow $\boxed{+10}$ \rightarrow $\boxed{4}$
To enter 20 \rightarrow $\boxed{+10}$ \rightarrow $\boxed{+10}$ \rightarrow $\boxed{0}$

If the +10 button is pressed by mistake

Press the CLEAR button, then press the other buttons for desired number.

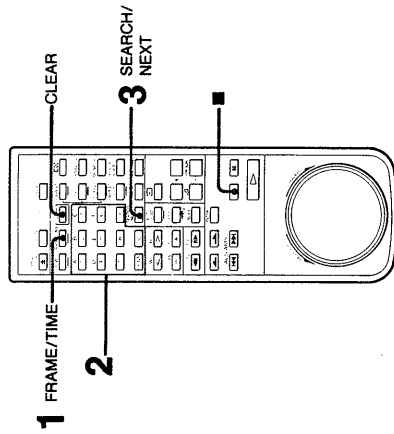
NOTES

- The chapter search feature will not function if the disc does not include chapter numbers. In this case, the screen message will give only frame or time numbers.
- If a chapter number not contained on an LD is entered, playback stops. If the ALL repeat function is on (see page 22), playback will resume from the beginning of the disc.
- During CDV playback, the unit will not accept entry of track numbers not contained on the disc.

To Search for a Particular Scene

Frame Search (CAV Discs)

Each picture on a CAV (standard-play) disc is called a frame.



Example: Locate frame number 12340.

- 1 Press FRAME/TIME.**
- 2 Press "1", "2", "3", "4", and "0" in sequence to enter the frame number.**
If you enter a wrong frame number, press FRAME/TIME once more to return the display indication to zero, and then enter the correct number.
- 3 Press SEARCH/NEXT.**
The desired frame is located, and playback automatically starts.

Search can be made in the freeze-frame, pause, and speed play modes as well as the normal playback mode. When the desired frame appears after the search, playback continues in the same mode.

To cancel frame search

Before the SEARCH/NEXT button is pressed: Press CLEAR.
After the SEARCH/NEXT button was pressed: Press ■.

To check the current chapter and frame numbers

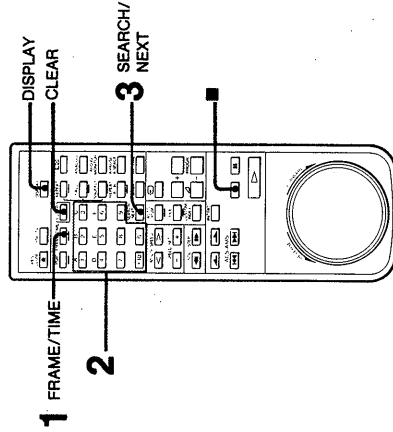
These numbers appear in the display window on the player. Press DISPLAY on the Remote Commander to display them on the screen.

Note

If a frame number not contained on a disc is entered, playback stops. If the ALL repeat function is on (see page 22), playback will resume from the beginning of the disc.

Time Search (CLV Discs)

CLV (extended-play) discs keep track of the position as elapsed time from the beginning of the disc.



Example: Locate the 12 min 05 sec point.

- 1 Press FRAME/TIME.**
- 2 Press "1", "2", "0", "5" in sequence.**
If you enter a wrong time number, press FRAME/TIME once more to return the display indication to zero, and then enter the correct number.
- 3 Press SEARCH/NEXT.**
The picture of the desired time number is located, and playback automatically starts.

To cancel time search

Before the SEARCH/NEXT button is pressed: Press CLEAR.
After the SEARCH/NEXT button was pressed: Press ■.

To check the current chapter and time numbers

These numbers appear in the display window on the player. Press DISPLAY on the Remote Commander to display them on the screen.

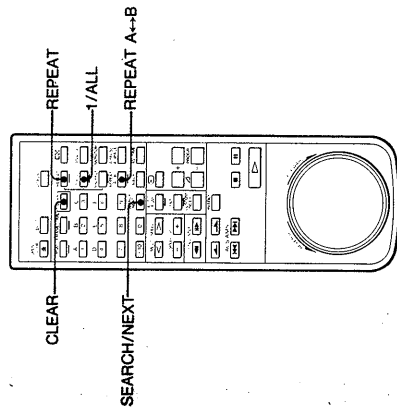
Notes

- If the disc does not include time data to the second, enter the time in minutes only.
- If the selected number is greater than the total time of the disc, playback stops. If the ALL repeat function is on (see page 22), playback will resume from the beginning of the disc.

To Play Particular Portion of a Disc

Repeat Playback

A single chapter or track, a designated portion of a disc, or the entire disc can repeatedly be played back.



To repeat the current chapter or track - SINGLE repeat

- 1 Press REPEAT.
- 2 Press 1/ALL.
REPEAT and SINGLE indications light up in the display window.
When the end of the current chapter or track is reached, playback of the chapter or track is automatically repeated.

To repeat the entire side of the disc - ALL repeat

Press REPEAT.
The REPEAT indication lights up in the display window, and the entire side of the disc is repeatedly played back.

To repeat a designated portion of a disc - A→B repeat

- 1 During playback, press REPEAT A→B at the start point (point A) of the desired portion.
The REPEAT A→B indication flashes in the display window.
- 2 At the end point (point B) of the desired portion, press REPEAT A→B.
The REPEAT A→B indication lights up in the display window.
The player returns to the point where REPEAT A→B was first pressed, and repeat playback automatically starts.

To use custom repeat

To carry out repeat playback between two predefined points on the disc, see page 33.

To check the current status

Check the indications in the display window or use the DISPLAY button to verify the current setting on the screen.

To cancel A→B repeat

Press CLEAR.

To cancel repeat functions other than A→B repeat

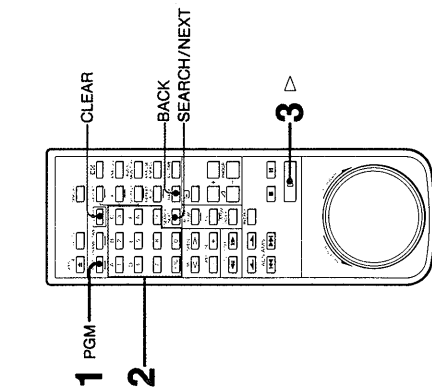
Press REPEAT again to cause the REPEAT indication in the display window to go out. (The button that was used to activate repeat - on the main unit or on the Remote Commander, REPEAT - must be pressed to cancel it.)

repeat switch on the unit

Select ON to repeat the entire disc side.

Program Playback

Up to 20 chapters or tracks can be played back in a specified order.



Example: To play LD chapter 5, 4, 2, and 6 in that order.

- 1 Press PGM.
The PROGRAM indication in the display window lights up.
- 2 Enter the chapter numbers by pressing "5", "4", "2", and "6" in sequence.
- 3 Press (play).
The first chapter is searched for, and playback starts from the beginning of chapter 5 and continues through chapter 4, 2, 6, and stops.

Notes

- When the shuttle ring is kept turned to the forward direction during program playback and the playback comes to the end of the current selection, the next programmed chapter will be played back. When the shuttle ring is kept turned to the reverse direction, the unit will not go back to previous chapters. If you want to move a preceding programmed chapter, press button until the desired programmed number comes up.
- If not-existing chapter numbers on a disc are entered, the program cannot be conducted.
- Programmed contents are stored until the disc is removed or the power is switched off.

If you make a mistake in chapter number entry

To start over, press CLEAR, and PGM again, and enter the correct numbers.
To change a number, press SEARCH/NEXT (for the next number) or BACK (for the previous number) until the incorrect number flashes on the screen, and then enter a new number.

To release or cancel program playback

Press CLEAR or 1/ALL. The player reverts to normal playback.

To repeat program playback

Use REPEAT to call up the REPEAT indication.

To enter chapter numbers over 10

Use the +10 and "0" buttons.

If the +10 button is pressed by mistake

Press the CLEAR button, then press the other buttons for desired number.

To move to a preceding or following programmed track

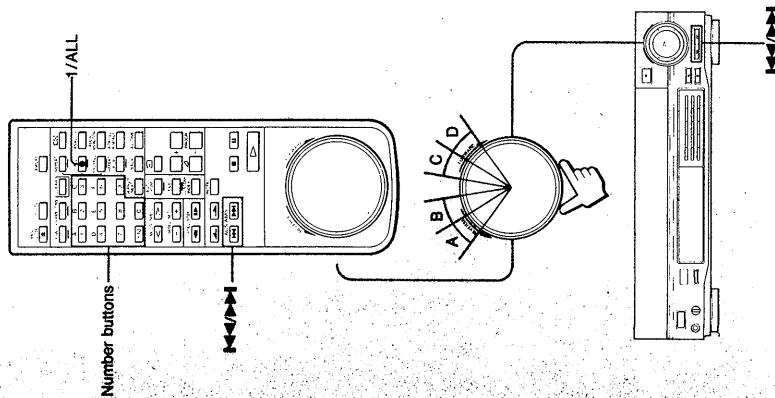
Press the or button.

To check the program contents

Press PGM.
The program is displayed for about 3 seconds on the screen. The currently playing program number blinks.

To Search for a Particular Track

The selections on CDs and CDVs are called tracks. Each track is assigned a track number which is indicated on the disc jacket or label.



To search by a track number

Enter the desired track number by pressing the number buttons.

To play a single track once

Use the 1/ALL button on the Remote Commander to call up the SINGLE indication. Then select the track with the numerical buttons. When the track has been played, the unit enters the stop mode. To release the setting, press 1/ALL again.

When a wrong number was entered

Press the button for the correct number.

To skip tracks

To advance to the beginning of successive tracks, press ►► repeatedly as needed. To return to the beginning of the current track, press ◀◀ once. Press repeatedly to go back to the beginning of previous tracks.

To search for a particular point

To scan at the fast speed

Turn the shuttle ring to B position for scanning in reverse at the fast speed and C for scanning forward.

To scan at the higher speed

Turn the shuttle ring to A position for scanning in reverse at the higher speed and D for scanning forward.

To resume the normal speed, release your finger from the shuttle ring.

To enter track numbers over 10
Use the +10 and "0" buttons.

If the +10 button is pressed by mistake
Press the CLEAR button, then press the other buttons for desired number.

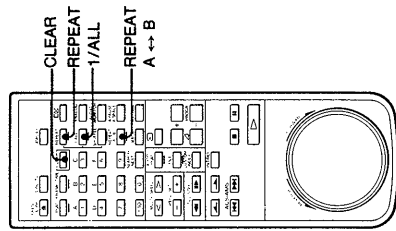
Sound during search

When scan is started from the playback mode, the sound can be heard at a low level. When scan was started from the pause mode, the sound is muted.

To Listen Only to Particular Track(s)

Repeat Playback

A single track, a specified portion of a disc, or all the tracks on a disc can repeatedly be played back.



To repeat the current track - SINGLE repeat

1 Press 1/ALL.

2 Press REPEAT

The REPEAT and SINGLE indications light up in the display window. When the end of the current track is reached, playback of the track is automatically repeated.

Press REPEAT to turn off the REPEAT indication to repeat the track only once.

To repeat all tracks - ALL repeat

Press REPEAT.

The REPEAT indication lights up and the entire disc is repeatedly played back.

To repeat a designated portion of a disc - A ↔ B repeat

1 During playback, press REPEAT A ↔ B once at the start point (point A) of the desired portion. The REPEAT A ↔ B indication flashes in the display window.

2 At the end point (point B) of the desired portion, press REPEAT A ↔ B.

The REPEAT A ↔ B indication lights up. The player returns to the point where REPEAT A ↔ B was first pressed, and repeat playback automatically starts.

To cancel A ↔ B repeat
Press CLEAR.

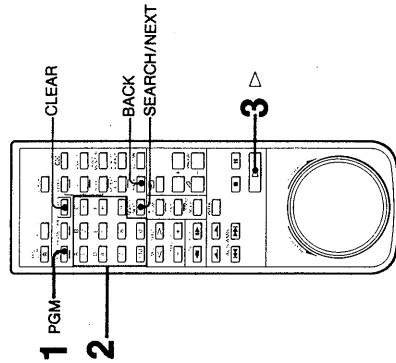
To cancel repeat functions other than A ↔ B repeat
Press REPEAT again to cause the REPEAT indication in the display window to go out. (The ◀ button that was used to activate repeat - on the main unit or on the Remote Commander, REPEAT - must be pressed to cancel it.)

repeat switch on the unit
Select ON to repeat the entire disc side.

To Change Time Display (AV TIME)

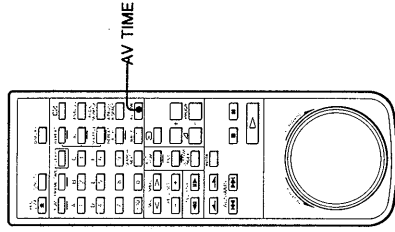
Program Playback

Up to 20 tracks can be played back in a specified order.

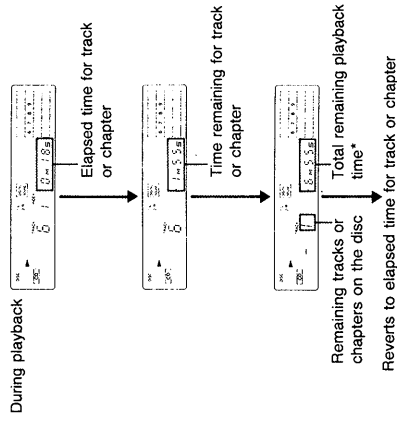


Example: To play tracks numbered 5, 4, 2, and 6 in that order.

- 1 Press PGM.**
The PROGRAM indication in the display window lights up.
- 2 Enter the track numbers by pressing "5", "4", "2", and "6" in sequence.**
- 3 Press \blacktriangle (play).**
The first track is searched for, and playback starts from the beginning of the track 5 and continues through track 4, 2, 6, and stops.



To change the time display in the display window, press **AV TIME**.
The display changes in the following sequence each time the button is pressed.



* With a CDV disc, these figures refer only to the portion (audio/video) currently in use.

If you make a mistake in track number entry
To start over, press CLEAR, and PGM again, and enter the correct numbers.
To change a number, press SEARCH/NEXT (for the next number) or BACK (for the previous number) until the incorrect number flashes in the display window, and then enter a new number.

To enter track numbers over 10
Use the +10 and -10 buttons.

Example: To enter 14 $\boxed{+10} \rightarrow \boxed{4}$
To enter 20 $\boxed{+10} \rightarrow \boxed{+10} \rightarrow \boxed{0}$

If the +10 button is pressed by mistake
Press CLEAR button, then press the other buttons for desired number.

To release or cancel program playback
Press CLEAR or 1/ALL. The unit reverts to normal playback.

To repeat a program
Press REPEAT to turn on the REPEAT indication in the display window.

\blacktriangle **repeat switch on the unit**

Select ON to repeat the entire disc side.

To move to a preceding programmed track
Press the \blacktriangle button.

To move to a following programmed track
Press the \blacktriangleright button.

NOTES

- When the shuttle ring is kept turned to the forward direction during program playback and the playback comes to the end of the current selection, the next programmed track will be played back. When the shuttle ring is kept turned to the reverse direction, the unit will not go back to previous tracks.
- If no existing track numbers on a disc are entered, the program may not be conducted.

To check time and track information on a TV or monitor screen

Turn on the power of the TV or monitor connected to the player and press DISPLAY. Time and track information for the CD/CDV is shown on the screen.

During program play

The numbers on the AV calendar display go out as tracks are played. The contents of a program are stored until the disc is removed or the player is turned off.

Program playing time

The total playing time of the program is displayed, only when tracks with numbers under 20 are programmed and the total playing time is less than 100 minutes.

Display on the screen

If the TV set or monitor connected to the player is on and the DISPLAY button is pressed, the track number, time, and other information recorded on the CD/CDV appears on the screen.

Note

The remaining time will not be displayed for a track number higher than 20 and playing time more than 100 minutes.

Note on LD discs

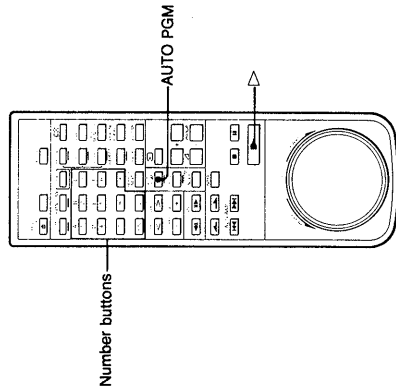
The time display function is available only with an LD containing TOC data.

First, the elapsed time or the number of frames is displayed. Pressing the AV TIME button then changes the time display as shown above.

To Listen Only to Particular Track(s)

Auto Program Playback

You can designate a length of time and make 2 different programs of selections fitting within that period. When there is only minimal time left within the designated length of time, a selection with the longest playing time shorter than the left time will be entered. This section explains how to conduct Auto Program Playback on a CD, but the function can also be used for LDs with TOC, and CDVs.



- 1 Press the AUTO PGM button.**
PGM blinks in the player display window.
- 2 Designate the time length for a single side of your tape.**
Example: For 30 minutes of playback
Press $\boxed{+10}$, $\boxed{+10}$, $\boxed{+10}$ and $\boxed{0}$.
Program A

Program B

Program A and B appears alternately, corresponding to Side A of tape and Side B of tape.
- 3 Press the Δ button.**
The selections for Program A will be played and then the unit will pause. The number of the selection that finishes its play disappears from the AV calendar display.
- 4 Press the Δ button to play back Program B.**

To resume normal playback
Press the CLEAR button or the 1/ALL button.

AV calendar on the screen
The AV calendar shows information on the contents of two different programs: program A and program B, separated with a pause.

Auto Program contents
Program contents are stored until the disc is removed or the power is turned off.

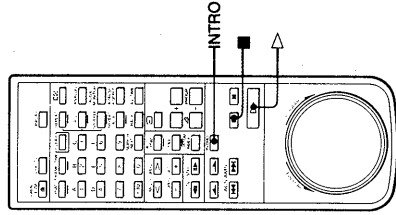
If your disc contains more than 20 selections
Selection with numbers over 20 may not be programmed with the Auto Program function.

Note

Auto Program will not be run if your selection is larger than the designated playing time.

INTRO Scan

The INTRO scan plays back only the beginning (introduction) of each chapter/track on a disc for approximately 10 seconds for a PAL disc and approximately 8 seconds for an NTSC disc. The INTRO scan will also play back the scenes of the video chapter for LD and CDV.



To start INTRO scan playback
Press INTRO button.

LD

Then the beginning portion of each chapter will be played back for a short time, about 10 seconds for a PAL disc and for about 8 seconds for an NTSC disc, in order from chapter 1. After the playback of the last chapter, the player will be paused.

CD/CDV

Then the beginning portion of each track will be played back for a short time, about 10 seconds for a PAL disc and for about 8 seconds for an NTSC disc, in order from track 1. After the playback of the last track, the player will be paused.

- Playback will begin with the video portion for CDV discs.

To resume normal playback

Press the Δ button. During search functions, normal playback will resume from the selection to be searched when the Δ button is pressed.

To stop playback

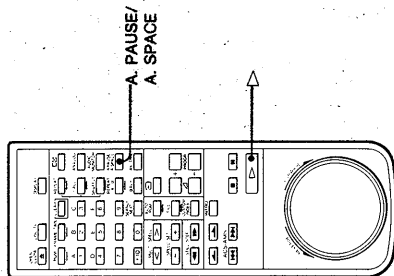
Press the \blacksquare button to stop.

Auto Pause

After a chapter or track is played, the player enters the pause mode.

Press A. PAUSE/A. SPACE.

To start playback of next chapter or track
Press \blacktriangleright (play).

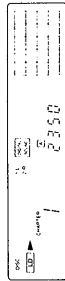


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Custom Index

To set a custom index mark

Press FILE during playback.
Up to six locations anywhere on the disc can be marked.



Indications A, B, C, etc. light up for each custom index mark.

Custom index search

1 Press CUSTOM INDEX.

The AV calendar goes out and the number buttons 1-6 act as file search buttons A-F.

2 Press the file search button for the desired location.

Playback starts from the specified index point and continues until the end of the disc.

To jump to another index point

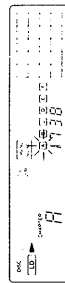
Press the corresponding file search button.

To return to normal playback

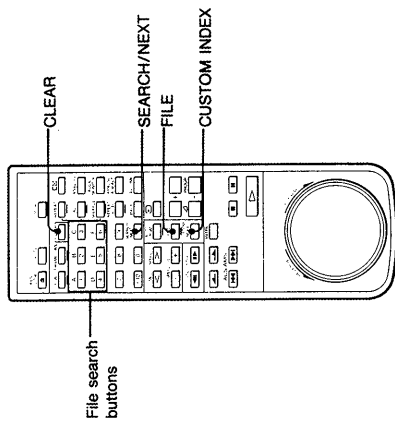
Press CUSTOM INDEX or CLEAR.

If you make a mistake

Press SEARCH/NEXT to cause the file indication to flash.



Press CLEAR and then FILE at the correct location.



Custom Index

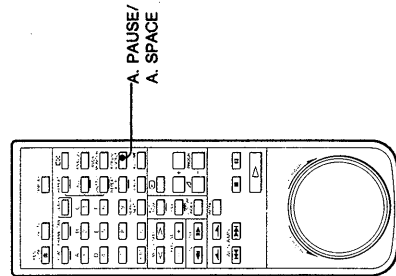
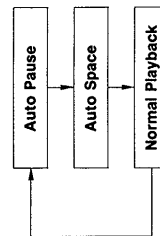
The Custom Index function lets you set six index marks max. at any point on the disc. Playback can then be started from an index point at the push of a button, and repeat playback between index points is also possible. This chapter explains how to set custom index marks on an LD, but the function can also be used for CDs or CDVs.

Auto Space

A blank interval of more than 3 seconds is inserted between playback of each chapter or track.

Press A. PAUSE/A. SPACE.

To return to normal playback
Each press of the A. PAUSE/A. SPACE button cycles the unit through the following conditions.



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Shuffle Playback

To play a section between custom index points once
Press 1/ALL, so that the SINGLE indication is shown in the display window. Then perform custom index search to the desired index start point.
The section between this point and the next custom index point is played once.

To play a section between custom index points repeatedly
Press 1/ALL, so that the SINGLE indication is shown in the display window and press REPEAT to turn on the REPEAT indication. Then perform custom index search to the desired index start point. The section between this point and the next custom index point is continuously repeated.

Index point rearrangement
The custom index points are arranged on the disc not by the order in which they were input but by their relative location from the start of the disc. If a new index mark is set before an old one, the A, B, C, order is rearranged.

Note

While custom index search is performed, the A, B, C, ... file search indications go out one by one, but the indication for the last index point remains lit.

Custom index with a CDV disc
Although playback starts from the video portion, files will be arranged from the audio portion in A, B, C, order.

How is the custom index stored?

The custom index data are not actually recorded on the disc but stored in the memory of the player.
Therefore the custom index points set with one player cannot be used when the disc is played on another unit.

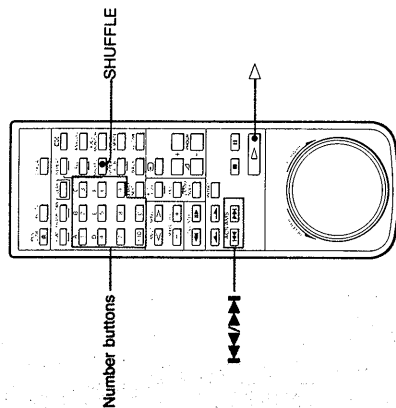
To clear a custom index mark

Information on index marks is retained also when the player is switched to normal playback. To cancel a stored index mark, use the SEARCH/NEXT button to cause the corresponding file search indication to flash, and then press CLEAR.

Note

When the disc is removed or the player is turned off, custom index memory will be erased.

The chapters or tracks on the disc can be played back in random order.



To play all tracks or chapters on a disc

1 Press SHUFFLE.

2 Press Δ (play).

All chapters or tracks on the disc are played once in random order. After all chapters or tracks have been played, the unit enters the stop mode.

To play only certain chapters or tracks (delete shuffle)

1 Press SHUFFLE.

2 Enter the chapter number or track number not to be played.

3 Press Δ (play).

The player automatically selects a random program without the deleted chapters or tracks.

If you make a mistake in entering the chapter or track number to be deleted
Press CLEAR and then press SHUFFLE again and enter the correct number.
Or, use the SEARCH/NEXT or BACK button to cause the wrong number to flash in the display window, and enter the correct number.

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To resume normal playback
Press CLEAR or 1/ALL.

To cancel shuffle playback
Press CLEAR or 1/ALL.

Normal playback resumes from the next chapter or track.

When an LD without TOC data is inserted, the indication "NO TOC" appears on the screen, and shuffle playback cannot be carried out.

Delete shuffle

This function lets you exclude specified chapters or tracks from shuffle play. When the function is used, the DELETE SHUFFLE display appears on the screen.

To skip to the next chapter or track in shuffle play

Press the \blacktriangleright button. Returning to a previous chapter or track with the \blacktriangleleft button is not possible.

Shuffle play with CDV discs

Tracks in the audio part and video part are played in random order.

To repeat shuffle or delete shuffle play

Press REPEAT to turn on the REPEAT indication.

When the unit is turned off or the disc is removed, shuffle functions are cancelled.

SHUFFLE button timing

To ensure correct operation, do not press SHUFFLE immediately after the disc tray has closed, but only after the Δ indication in the display window has stopped flashing.

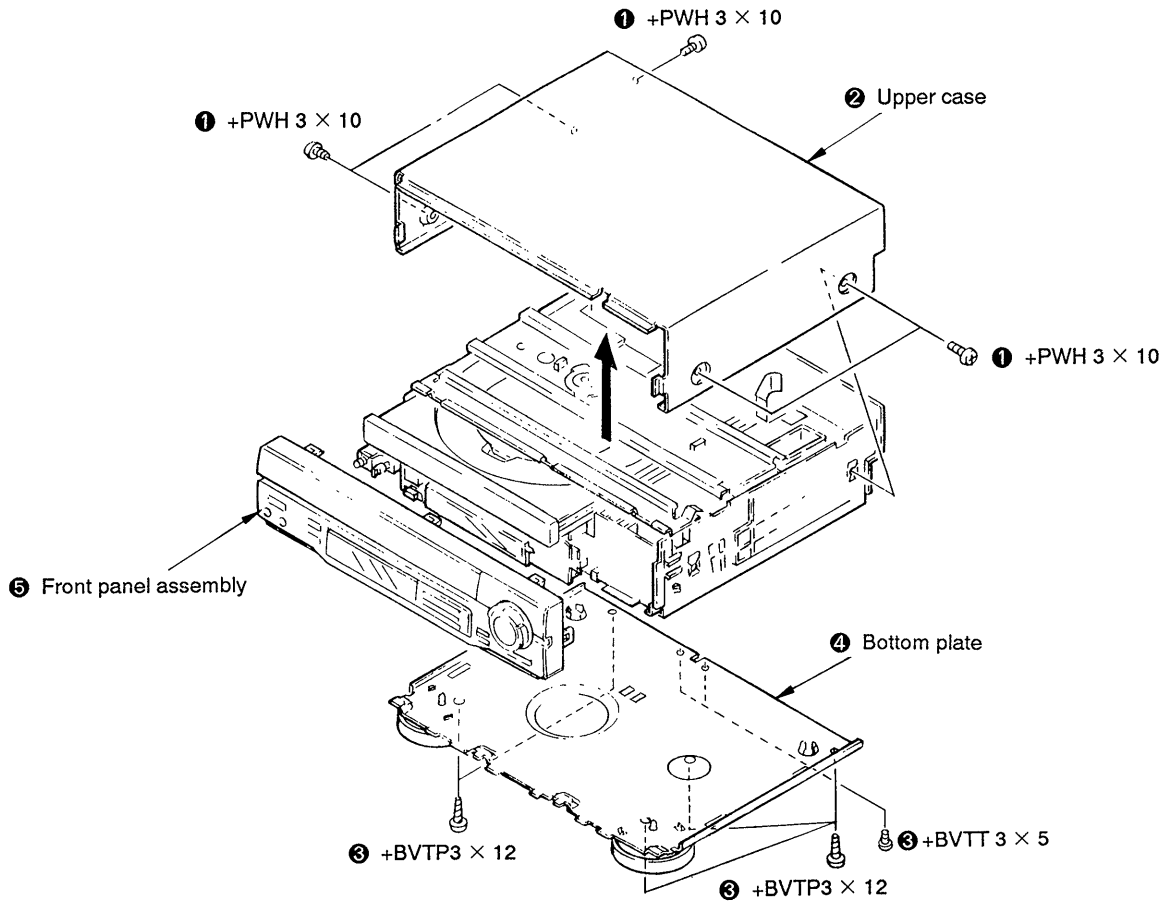
33

35

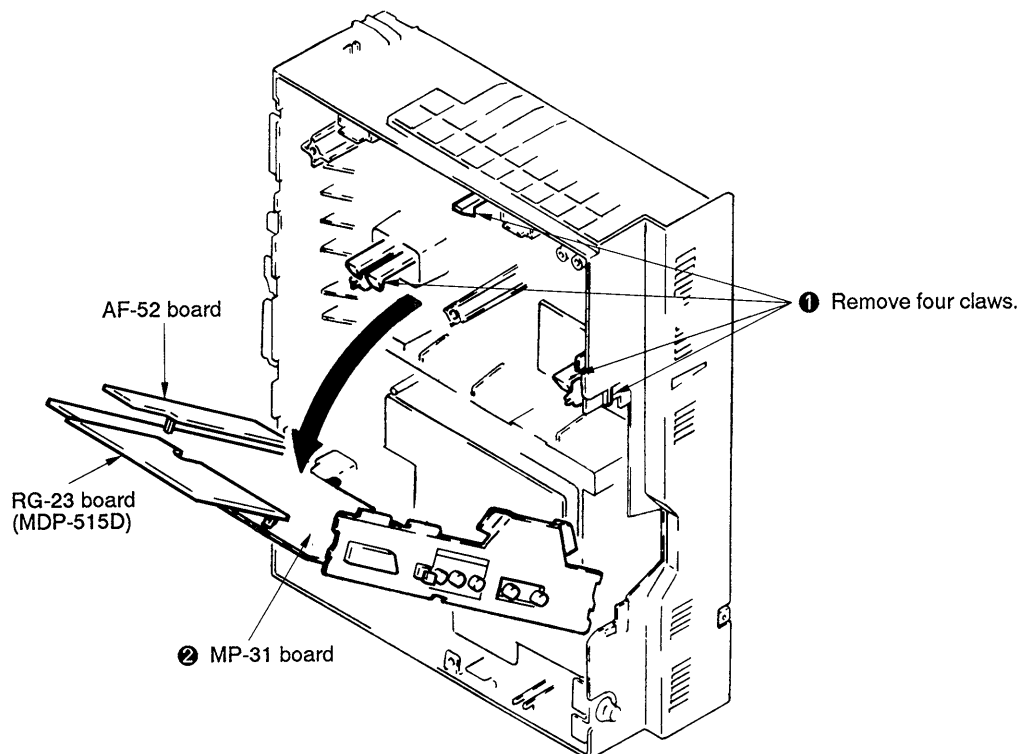
SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

2-1. CASE, FRONT PANEL ASSEMBLY

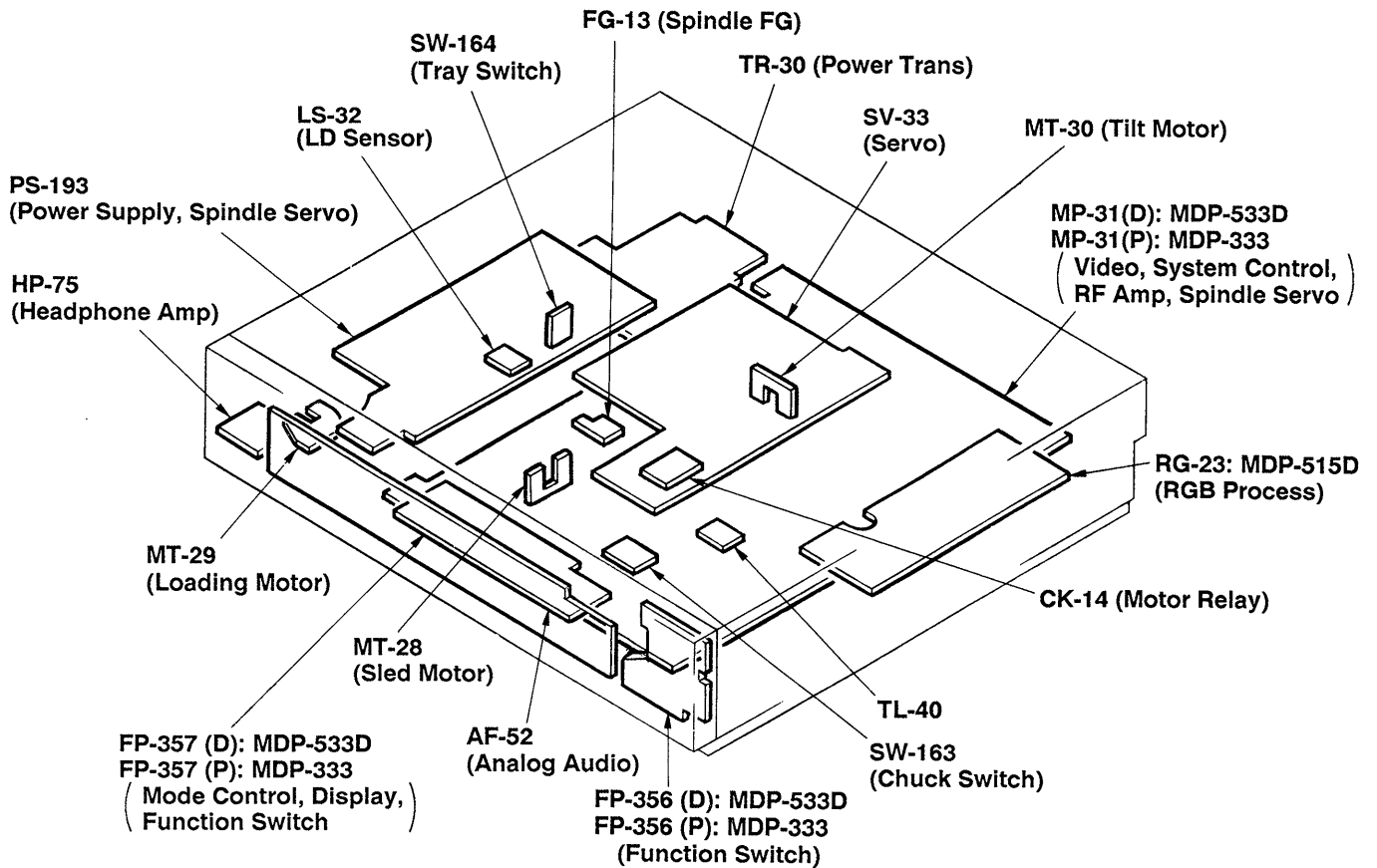


2-2. OPENING OF MP-31 BOARD



SECTION 3 DIAGRAM

3-1. CIRCUIT BOARDS LOCATION



3-2. CIRCUIT BOARDS DESCRIPTION

1. CIRCUIT BOARDS ONLY BOARD NAME CHANGED.
(CIRCUIT AND PATTERNS ARE NOT MODIFIED)

	MDP-315/515D	MDP-333/533D
1	SW-106 BOARD	SW-163 BOARD
2	SW-107 BOARD	SW-164 BOARD
3	LS-17 BOARD	LS-32 BOARD

2. CIRCUIT BOARDS DESIGNED FOR MDP-333/533D.

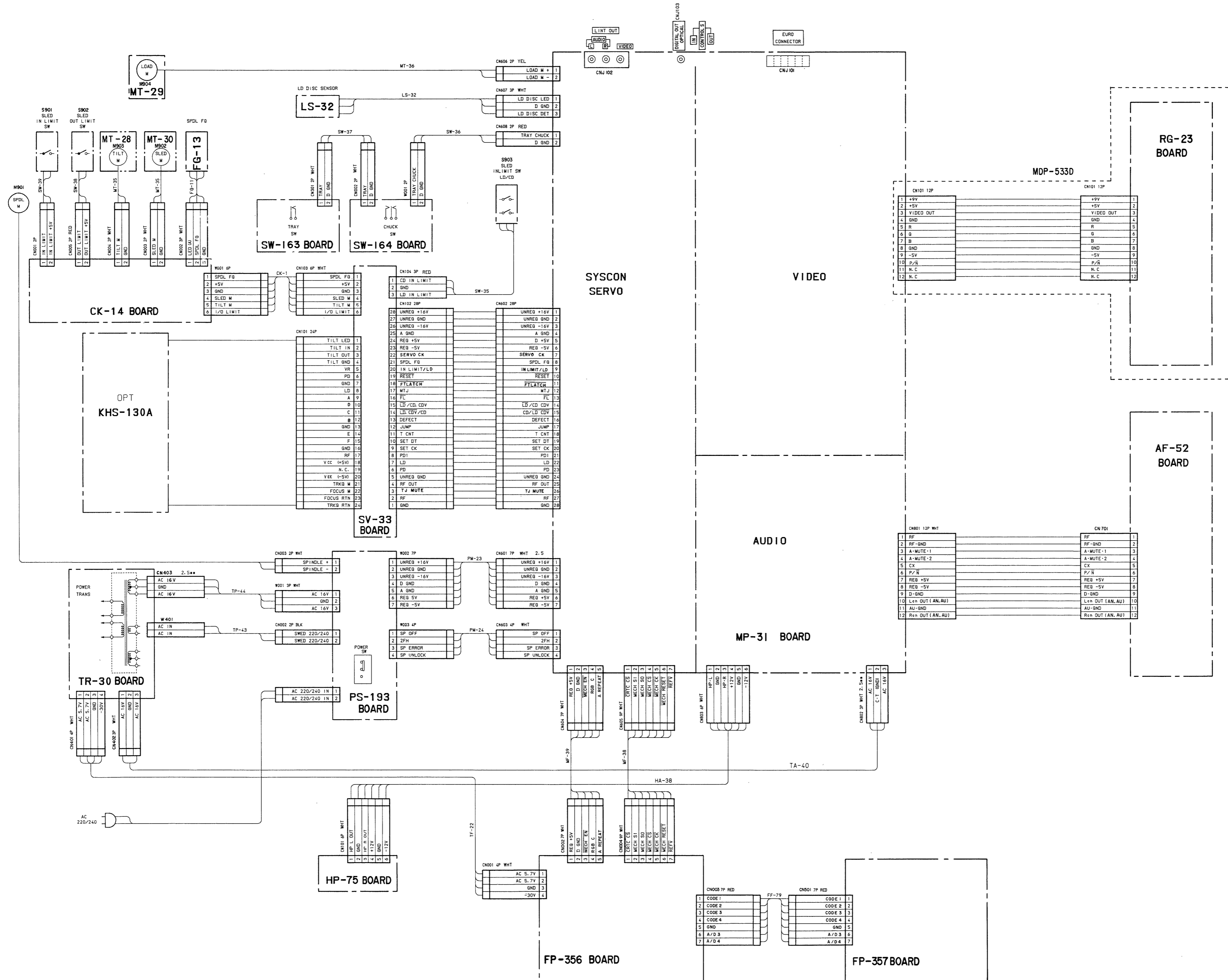
1	FP-357 (P)/357 (D) BOARD
2	FP-356 (P)/356 (D) BOARD
3	MP-31 (P)/31 (D) BOARD
4	RG-23 BOARD (MDP-533D)
5	HP-75 BOARD

SECTION 4

PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

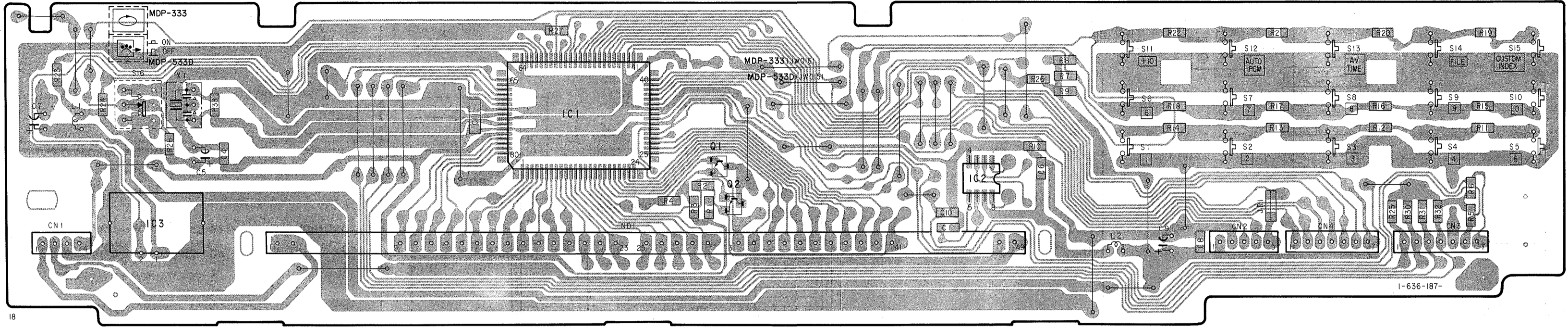
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

4-1. FRAME SCHEMATIC DIAGRAM

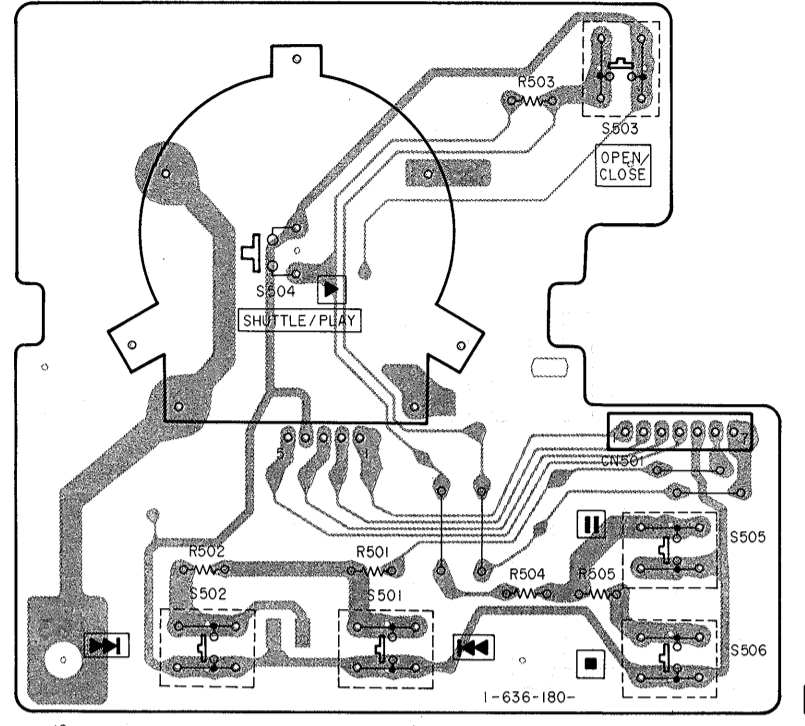


FP-356 (MODE/FUNCTION CONTROL), FP-357 (FUNCTION SWITCH), HP-75 (HEADPHONES AMP)
 - Ref. No.: FP-356 Board; 4,000 series, FP-357 Board; 5,000 series, HP-75 Board; 6,000 series -

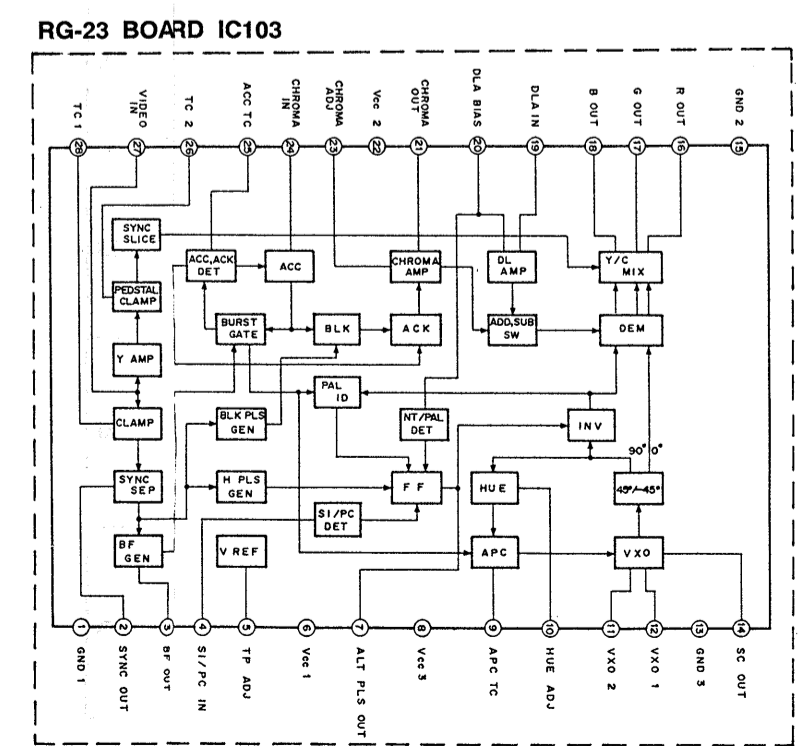
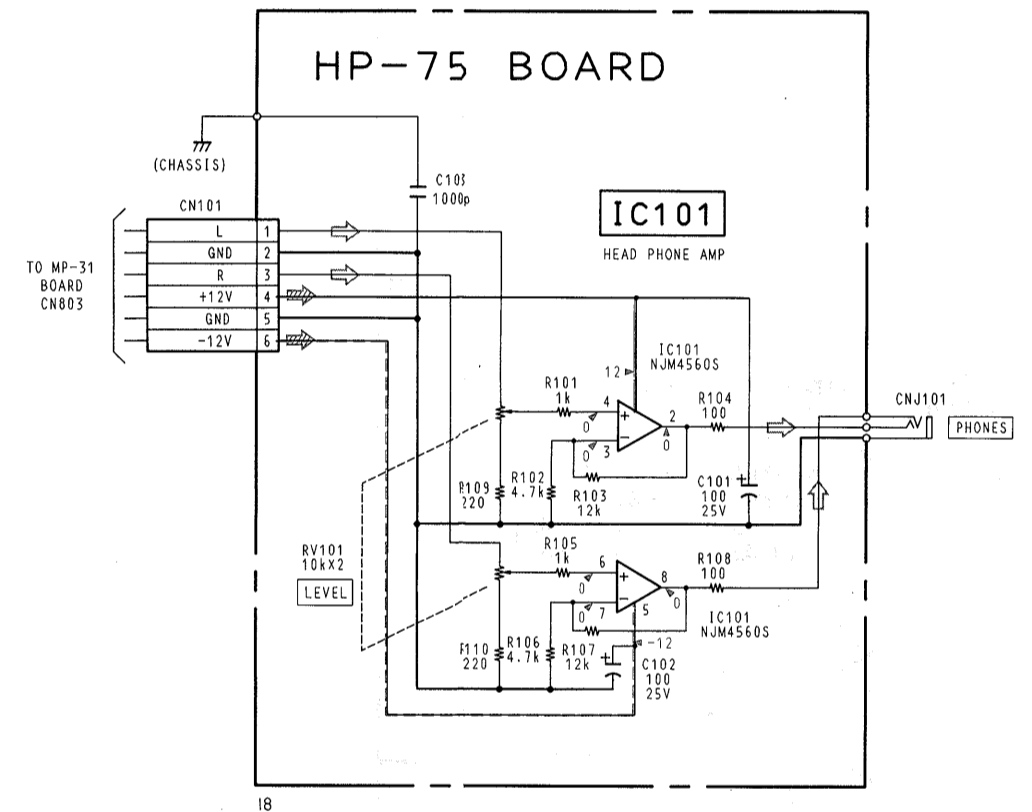
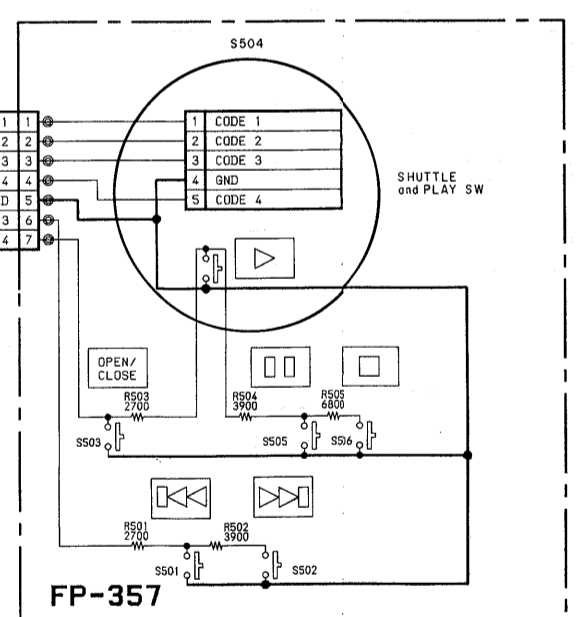
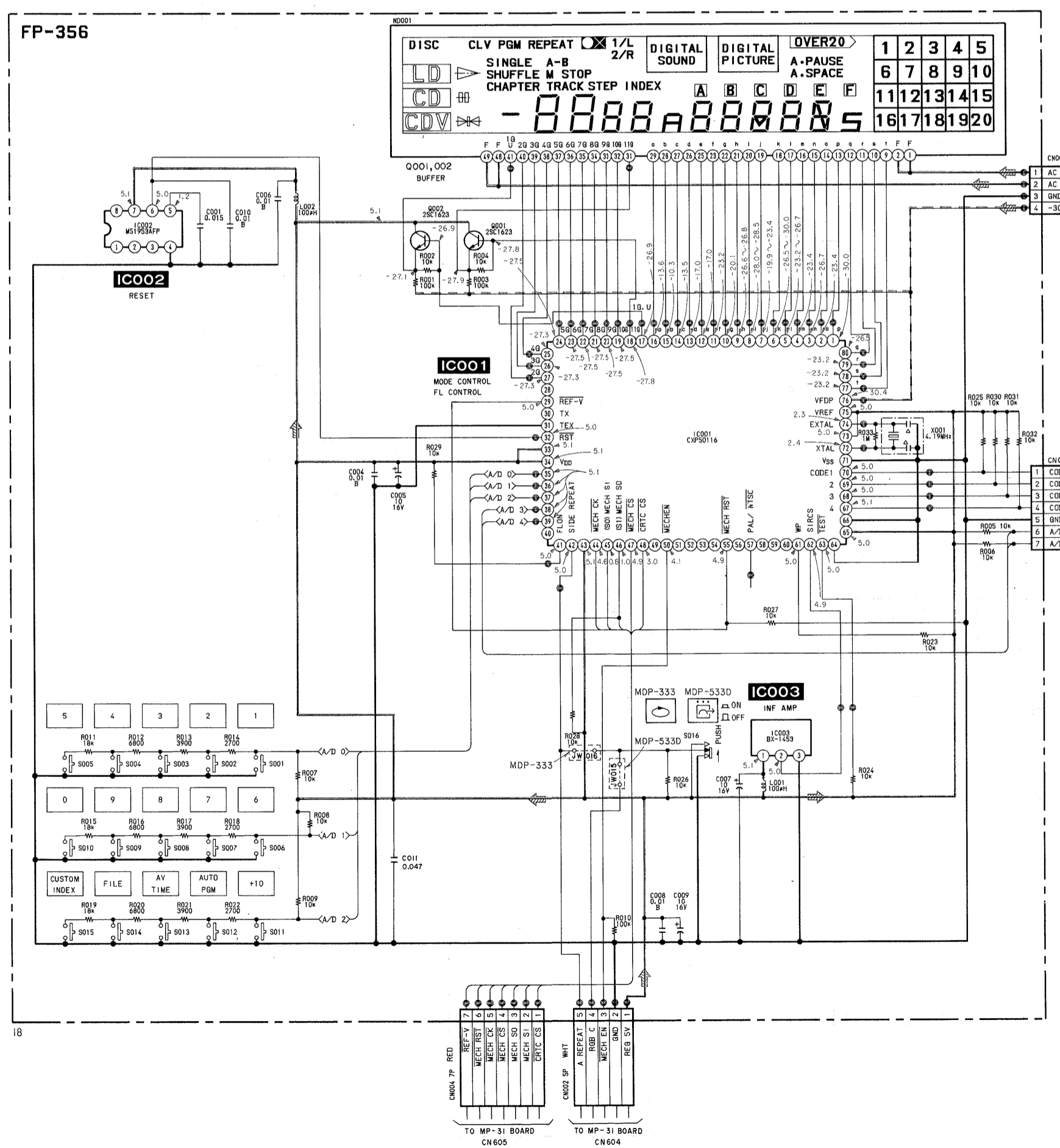
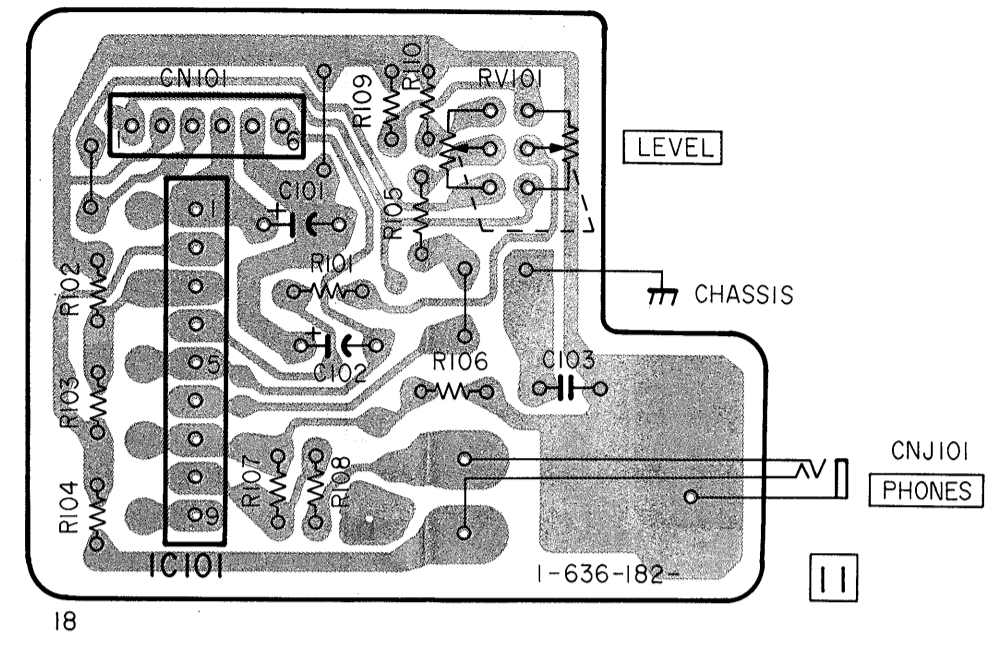
FP-356 BOARD



FP-357 BOARD



HP-75 BOARD



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
 (In addition to this, the necessary note is printed in each block.)

- For printed wiring boards:**
- — indicates a lead wire mounted on the component side.
 - — indicates a lead wire mounted on the printed side.
 - — Through hole.
 - ▨ — Pattern from the side which enables seeing.
 - ▩ — Pattern of the rear side.

Caution:
 Pattern face side: Parts on the pattern face side seen from the (Conductor Side) pattern face are indicated.
 Parts face side: Parts on the parts face side seen from the (Component Side) parts face are indicated.

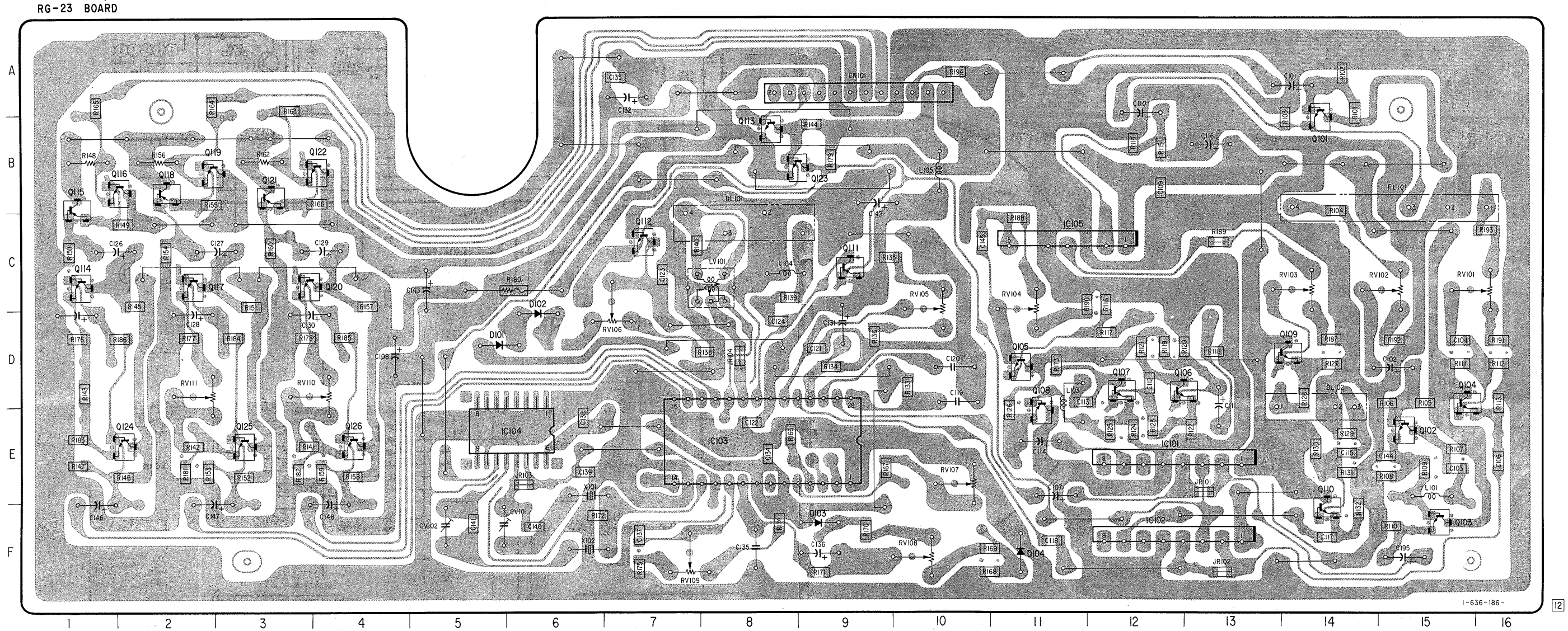
- *For schematic diagram:**
- Caution when replacing chip parts. New parts must be attached after removal of chip. Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
 - All resistors are in ohms, 1/4W (Chip resistors: 1/10W) unless otherwise noted. kΩ: 1000Ω, MΩ: 1000kΩ.
 - All capacitors are in μF unless otherwise noted. pF: μF 50V or less are not indicated except for electrolytics and tantalums.
 - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
 - : nonflammable resistor.
 - : fusible resistor.
 - : panel designation.
 - : internal component.
 - : adjustment for repair.
 - : B + Line.
 - : B - Line.
 - Voltages are dc between measurement points and ground unless otherwise noted.
 - Readings are taken with a color-bar signal playback.
 - Readings are taken with a digital multimeter (DC10MΩ).
 - Voltage variations may be noted due to normal production tolerances.
 - : IN/OUT direction of B line (+, -).
 - Circled numbers refer to waveforms.

When indicating parts by reference number, please include the board name.

Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

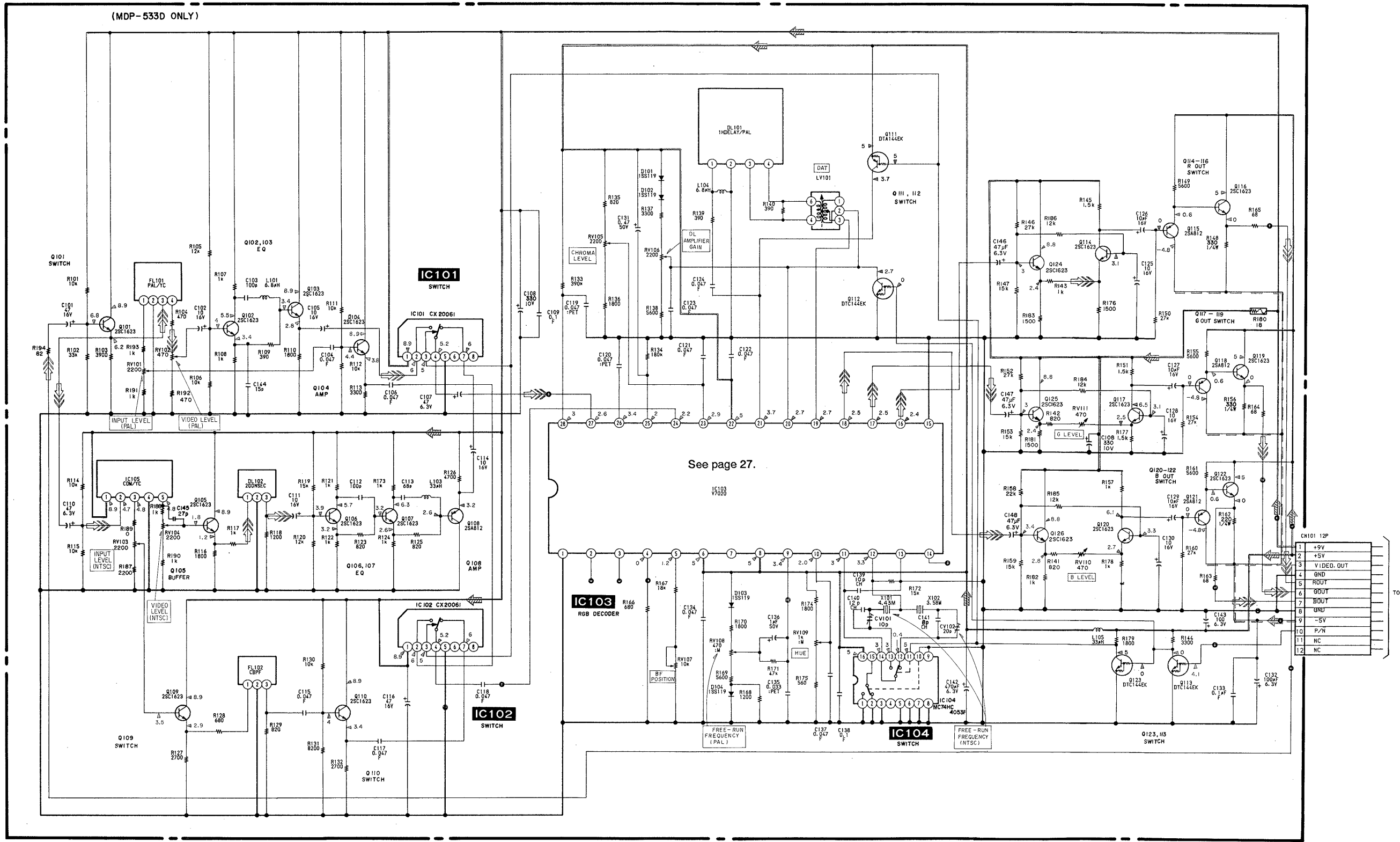
RG-23 (RGB PROCESS)

- Ref. No.: RG-23 Board; 6,000 series -



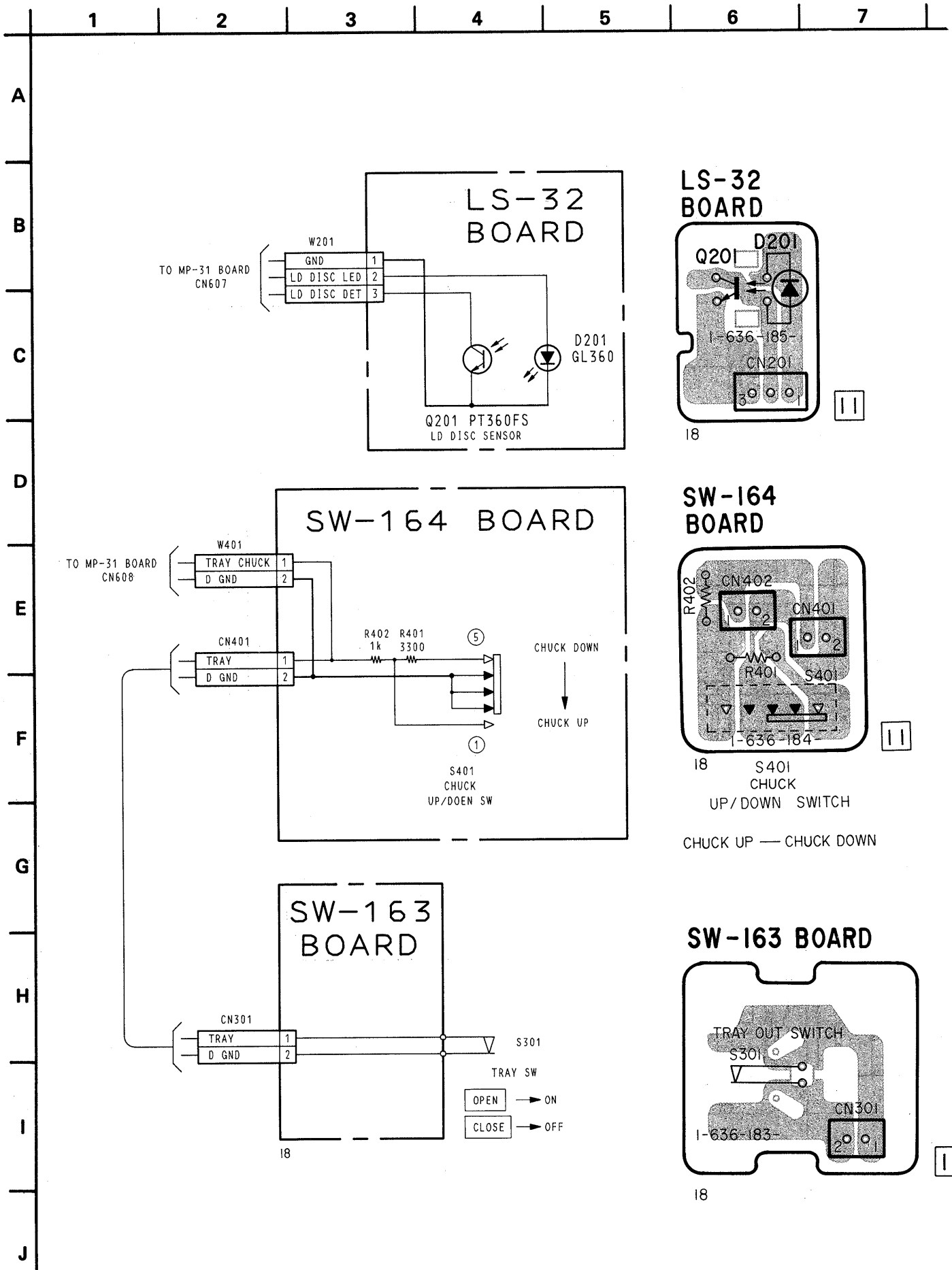
RG-23 BOARD

D 101	D-5	Q 101	B-14	Q 114	C-1
D 102	C-6	Q 102	E-15	Q 115	B-1
D 103	F-9	Q 103	F-15	Q 116	B-2
D 104	F-11	Q 104	D-15	Q 117	C-2
		Q 105	D-10	Q 118	B-2
		Q 106	E-13	Q 119	B-3
		Q 107	E-12	Q 120	C-4
IC 101	E-12	Q 108	E-11	Q 121	B-3
IC 102	E-12	Q 109	D-14	Q 122	B-4
IC 103	E-8	Q 110	F-14	Q 123	B-9
IC 104	E-6	Q 111	C-9	Q 124	E-2
IC 105	C-11	Q 112	C-7	Q 125	E-3
		Q 113	B-8	Q 126	E-4



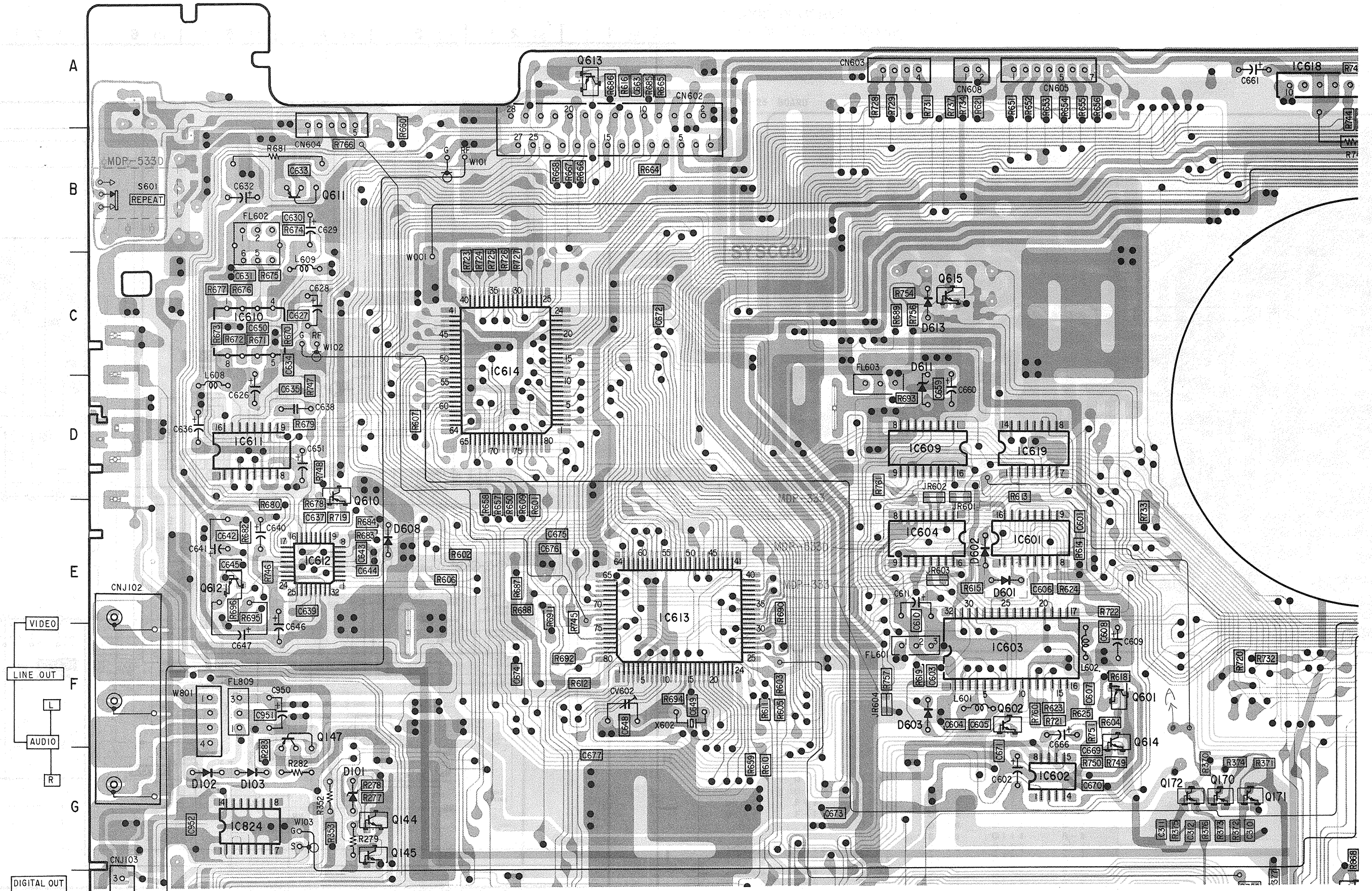
LS-32 (LD SENSOR), SW-163 (TRAY SWITCH), SW-164 (CHUCK SWITCH)

— Ref. No.: LS-32 Board; 3,000 series, SW-163 Board; 5,000 series, SW-164 Board; 2,000 series —

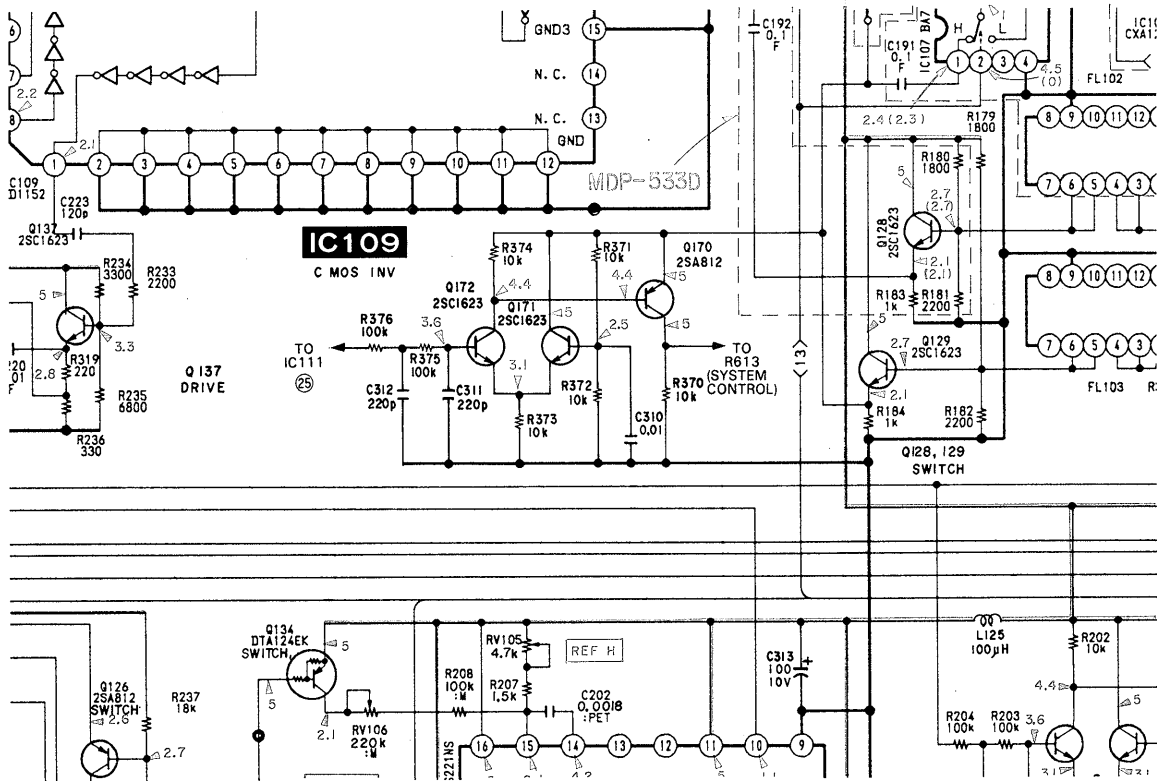


MP-31 (VIDEO, SYSTEM CONTROL)
 (DIFFERENCE BETWEEN MP-31 AND MP-15 BOARDS)

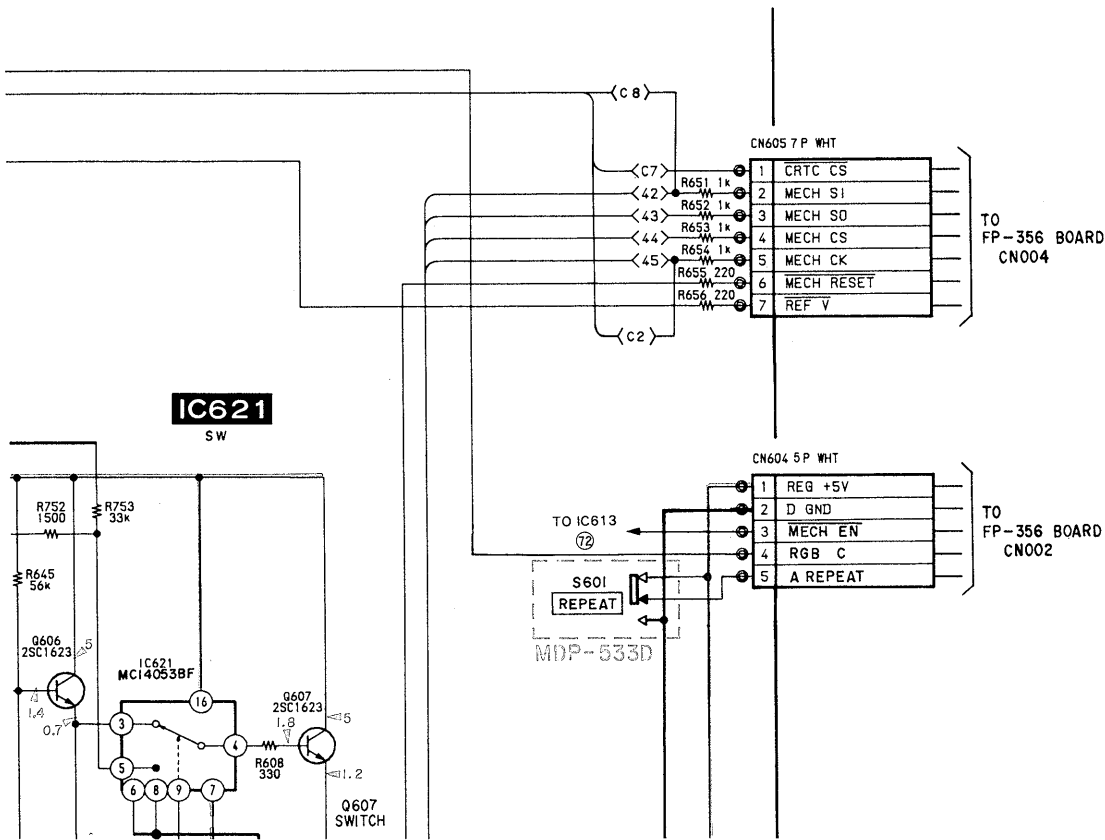
MP - 31 BOARD



• VIDEO SECTION



• SYSTEM CONTROL SECTION



• DIFFERENT CONNECTORS



	MDP-315/515D MP-15 BOARD	MDP-333/533D MP-31 BOARD
CN604	1-506-486-11 PIN, CONNECTOR 7P	1-506-484-11 PIN, CONNECTOR 5P
CN605	1-506-488-11 PIN, CONNECTOR 9P	1-506-486-11 PIN, CONNECTOR 7P

SECTION 5 EXPLODED VIEWS

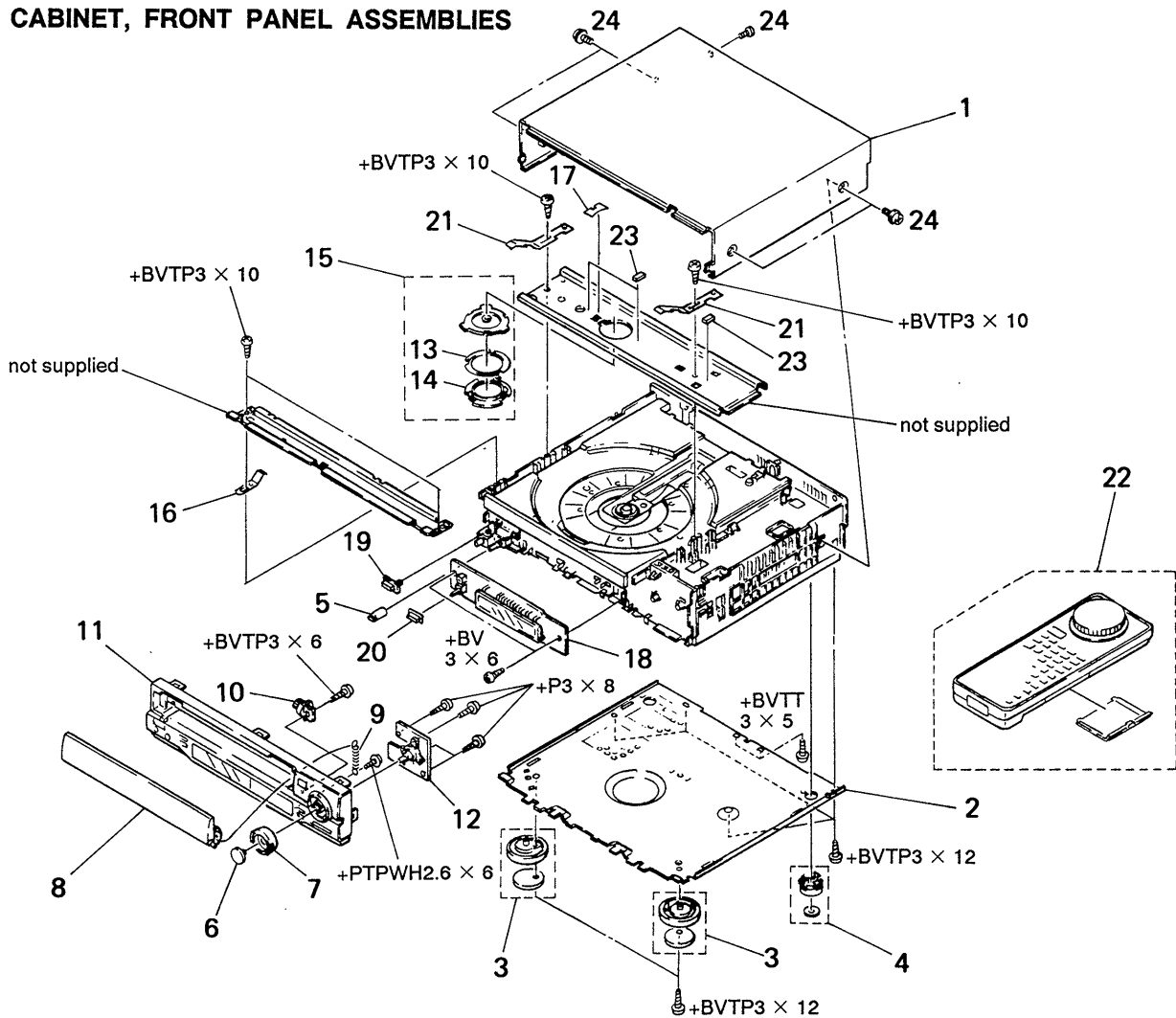
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts Color

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

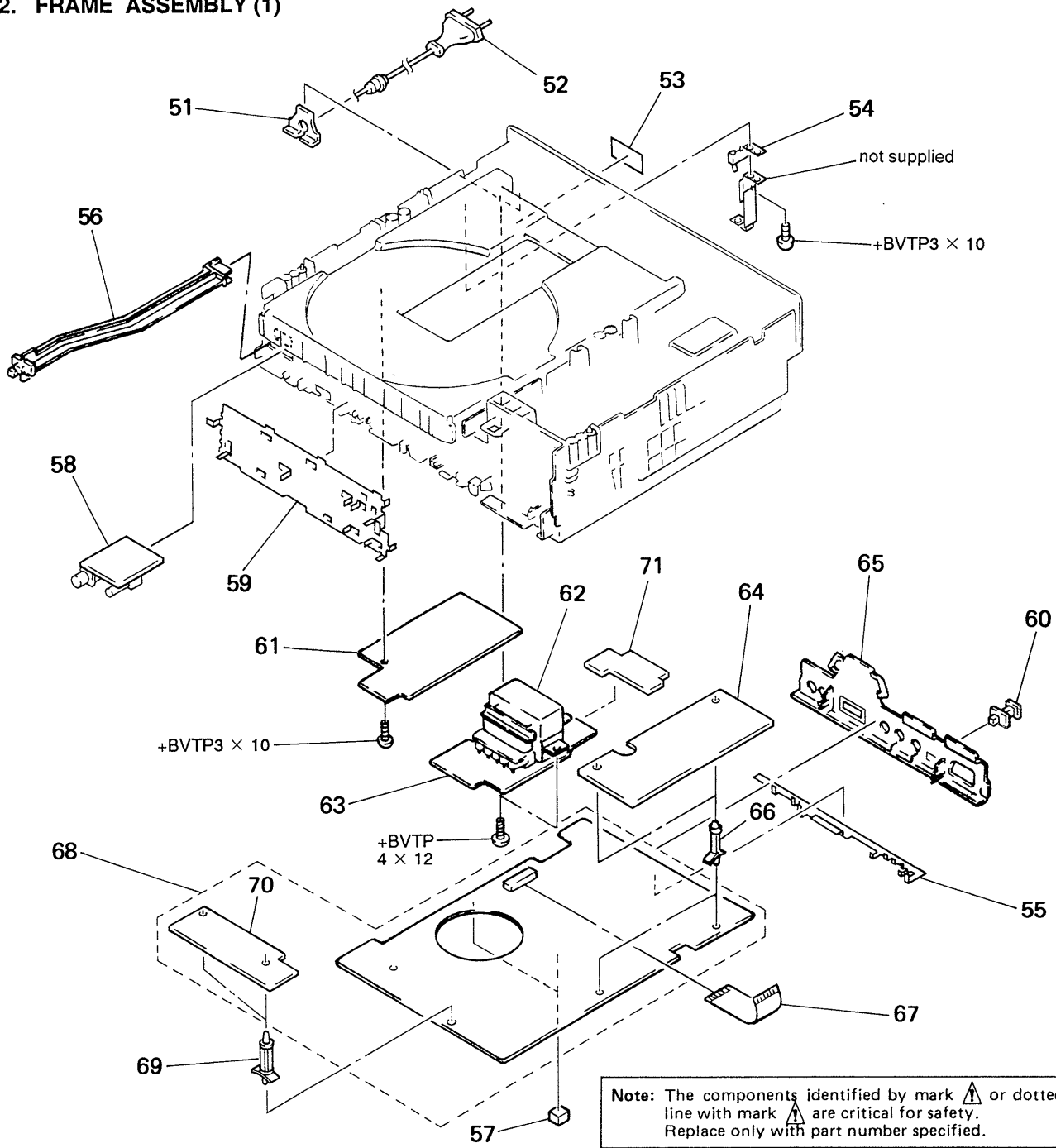
5-1. CABINET, FRONT PANEL ASSEMBLIES



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
1	*3-735-065-01	CASE, UPPER (MDP-333)		12	*1-636-180-11	FP-357 BOARD	
	*3-735-065-11	CASE, UPPER (MDP-533D)		13	3-735-011-01	SPRING	
2	*3-735-075-21	PLATE, BOTTOM		14	3-735-010-01	PLATE (1), PRESS	
3	X-3735-057-1	FOOT ASSY (MDP-533D)		15	X-3735-006-1	PLATE ASSY, PRESS	13, 14
	X-3735-063-1	FOOT ASSY (MDP-333)		16	3-735-090-01	SPRING	
4	X-3735-056-1	FOOT ASSY		17	*3-737-454-01	SHEET, HOLDER	
5	4-922-531-01	KNOB (A TYPE), LOV (MDP-333)		18	*A-6421-499-A	FP-356 (P) BOARD, COMPLETE (MDP-333)	
	4-922-531-61	KNOB (A TYPE), LOV (MDP-533D)			*A-6421-503-A	FP-356 (D) BOARD, COMPLETE (MDP-533D)	
6	3-741-951-51	BUTTON, PLAY (MDP-533D)		19	3-735-051-01	BUTTON, POWER (MDP-333)	
	3-751-951-61	BUTTON, PLAY (MDP-333)			3-735-051-21	BUTTON, POWER (MDP-533D)	
7	3-741-952-01	RING, SHUTTLE (MDP-333)		20	3-741-898-02	KNOB, A/R (MDP-533D)	
	3-741-952-21	RING, SHUTTLE (MDP-533D)			3-741-898-11	KNOB, A/R (MDP-333)	
8	X-3749-084-1	DOOR ASSY (P) (MDP-333)		21	3-735-089-01	SPRING	
	X-3940-039-1	DOOR ASSY (D) (MDP-533D)		22	1-465-496-31	REMOTE COMMANDER (RMT-333E)	
9	3-720-312-11	SPRING (DOOR), TENSION		23	*4-919-555-01	CUSHION	
10	4-919-393-01	DAMPER		24	3-710-901-11	SCREW (3X8), TAPPING	
11	X-3749-085-1	PANEL ASSY (P), FRONT (MDP-333)					
	X-3940-040-1	PANEL ASSY (D), FRONT (MDP-533D)					

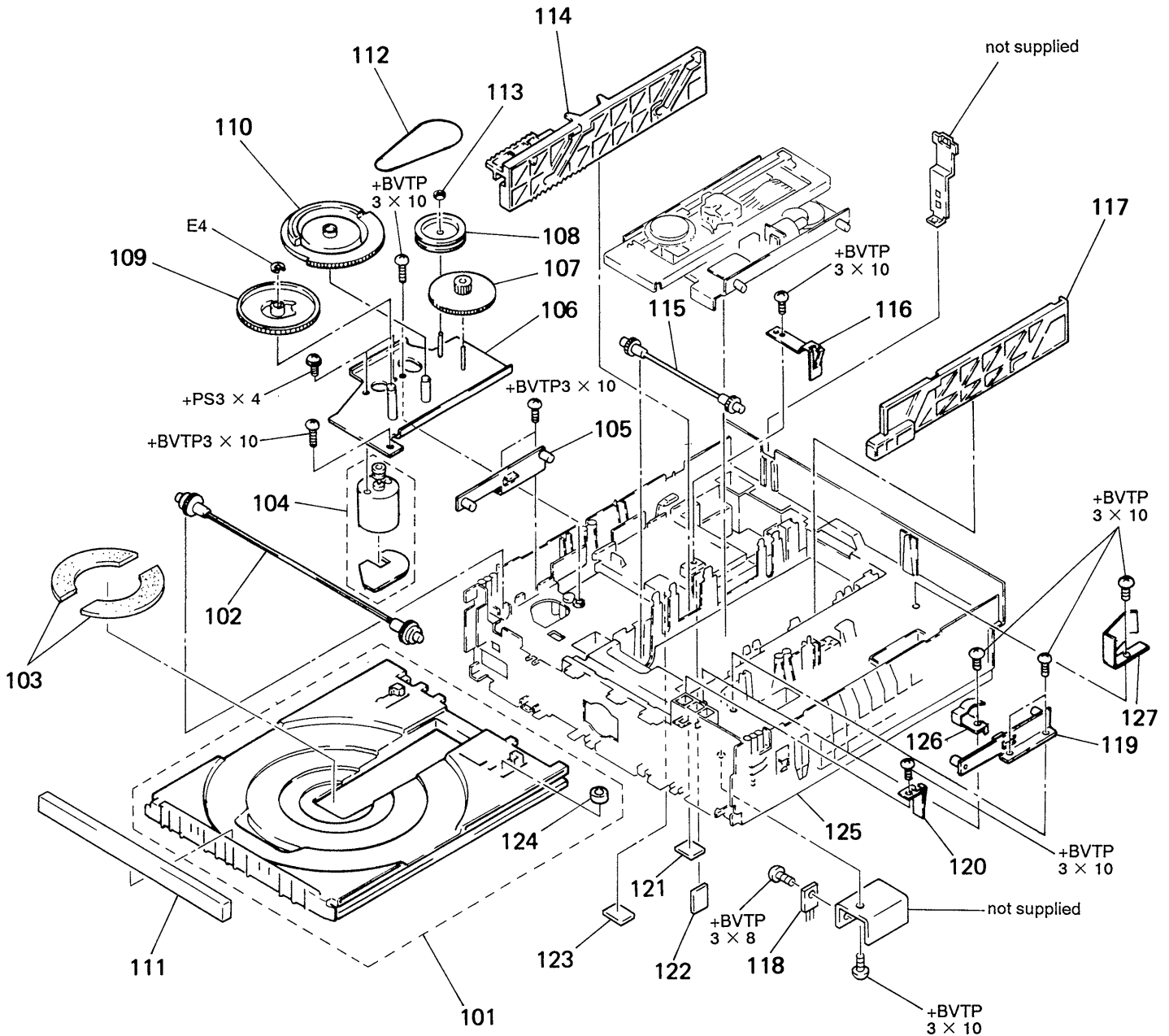
REVISED

5-2. FRAME ASSEMBLY (1)



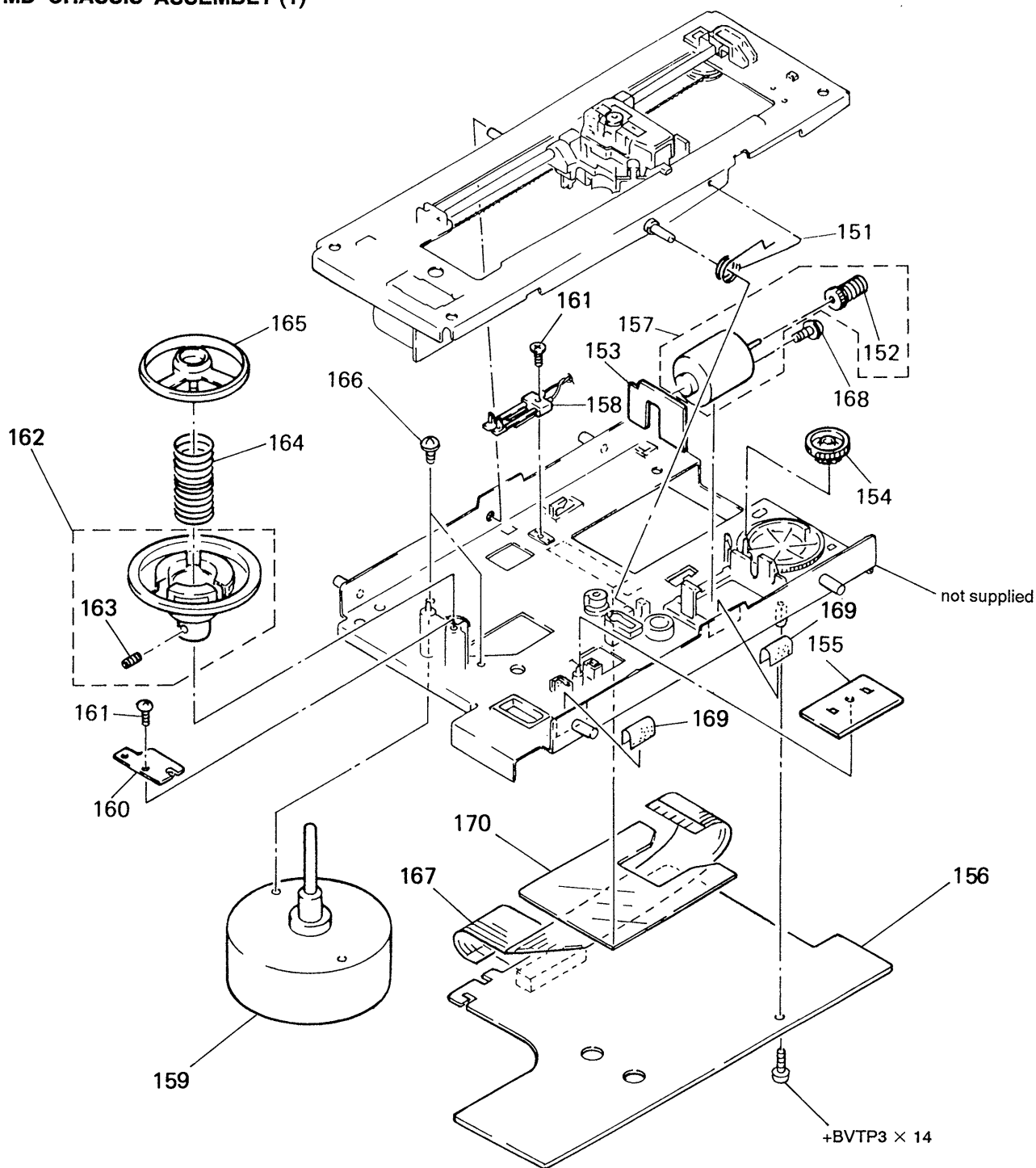
No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
51	*3-737-438-01	BRACKET, AC CORD		62	⚠1-449-849-11	TRANSFORMER, POWER (T401)	
52	⚠1-555-795-00	CORD, POWER, EULO PLUG		63	*1-630-089-31	TR-30 (Y) BOARD	
53	*3-749-471-01	LABEL, MODEL NUMBER (NO.2) (MDP-533D)		64	*A-6421-502-A	RG-23 BOARD, COMPLETE (MDP-533D)	
	*3-749-472-01	LABEL, MODEL NUMBER (NO.2) (MDP-333)		65	X-3749-149-1	PLATE (P) ASSY, JACK (MDP-333)	
	*3-941-646-01	LABEL, MODEL NUMBER (MDP-533D AUSTRALIAN)			X-3749-150-1	PLATE (D) ASSY, JACK (MDP-533D)	
	*3-942-560-01	LABEL, MODEL NUMBER (MDP-333 AUSTRALIAN)		66	*3-703-353-08	SUPPORTER, PC BOARD	
54	3-735-091-01	SPRING		67	*1-574-755-11	WIRE, FLAT TYPE 28P	
55	3-737-480-01	PLATE, GROUND, JACK		68	*A-6421-498-A	MP-31 (P) BOARD, COMPLETE (MDP-333)	69, 70
56	3-741-897-01	LEVER, POWER SW			*A-6421-501-A	MP-31 (D) BOARD, COMPLETE	69, 70
57	9-911-843-XX	CUSHION		69	*3-703-353-08	SUPPORTER, PC BOARD	
58	*1-636-182-11	HP-75 (U) BOARD		70	*A-6421-371-A	AF-52 (D) BOARD, COMPLETE	
59	*A-6415-365-A	HOLDER ASSY, PC BOARD		71	3-746-543-01	COVER, TRANSFORMER	
60							
61	*A-6421-372-A	PS-193 (Y) BOARD, COMPLETE					
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							

5-3. FRAME ASSEMBLY (2)



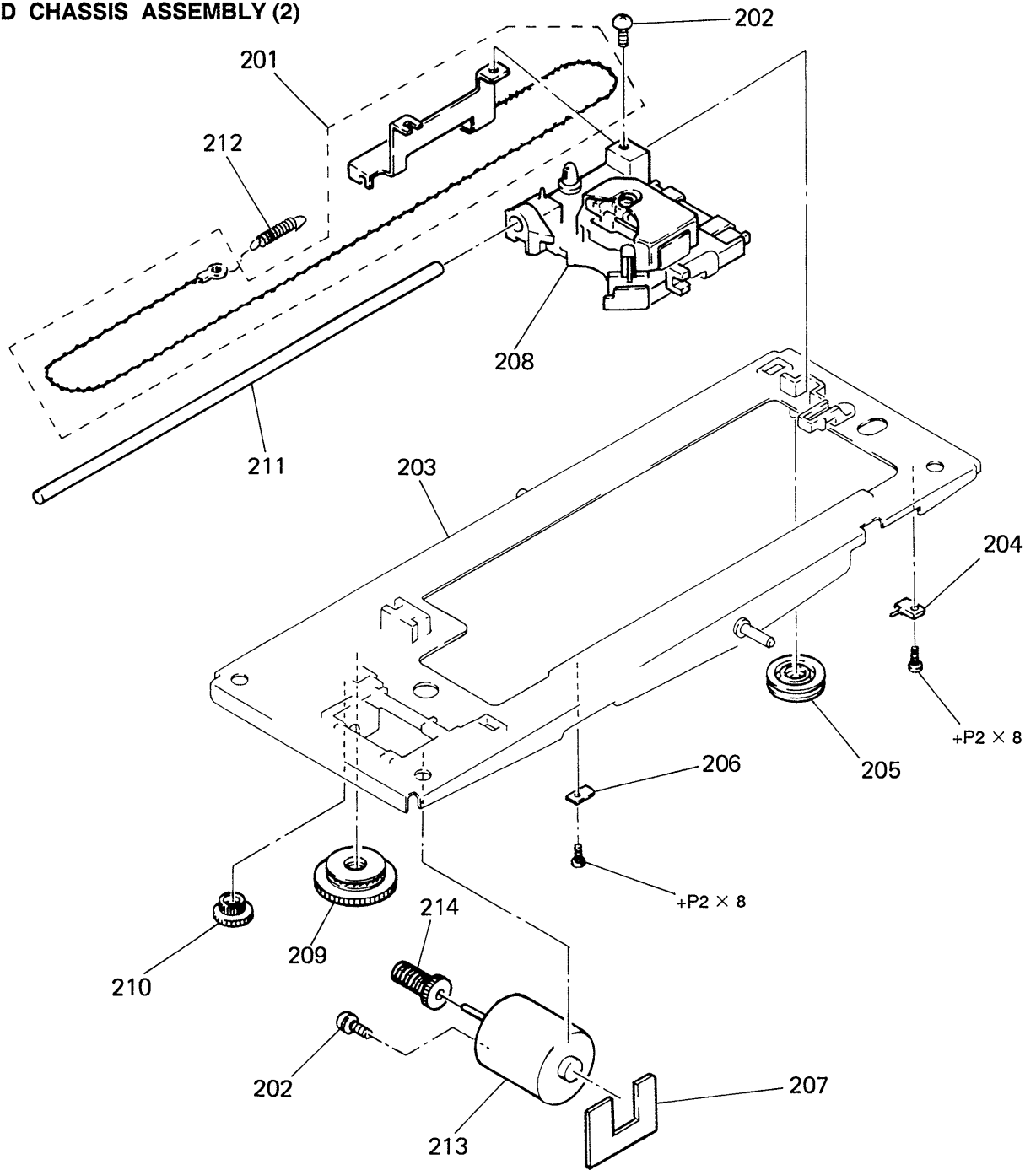
No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
101	X-3735-032-2	TRAY ASSY	111, 124	115	X-3735-008-1	GEAR ASSY, MD PHASE	
102	X-3735-069-1	GEAR ASSY, PHASE		116	3-737-401-01	SPRING (1)	
103	3-735-039-03	SHEET, CD		117	3-735-052-01	RACK (RIGHT)	
104	A-6415-359-A	MOTOR BLOCK ASSY (X), THREADING		118	8-759-604-47	IC M5F7905L	
105	X-3735-071-1	GUIDE ASSY (L), TRAY		119	X-3735-070-1	GUIDE ASSY (R), TRAY	
106	*X-3735-002-1	BASE ASSY, THREADING		120	3-737-402-01	SPRING (2)	
107	3-735-037-01	GEAR, MIDWAY		121	*1-636-183-11	SW-163 BOARD	
108	3-735-036-01	PULLEY (A)		122	*1-636-184-11	SW-164 BOARD	
109	3-735-035-01	GEAR, TRAY		123	*1-636-185-11	LS-32 BOARD	
110	3-735-056-01	CAM, DRIVING		124	*4-914-248-01	STOPPER, RUBBER	
111	3-746-506-01	COVER, TRAY		125	*3-735-071-51	FRAME	
112	3-545-601-XX	BELT, MIDWAY PULLEY		126	3-737-448-01	SPRING, LEAF	
113	3-669-595-00	WASHER (2), STOPPER		127	3-746-525-01	SPRING, TRAY	
114	3-735-053-01	RACK (LEFT)					

5-4. MD CHASSIS ASSEMBLY (1)





No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
151	3-735-021-01	SPRING, TORSION		161	3-719-845-11	SCREW (B2X8), TAPPING	
152	3-735-038-01	GEAR, WORM		162	X-3735-003-1	TURNTABLE ASSY	163
153	*1-631-095-11	MT-30 BOARD		163	3-701-506-01	SET SCREW, DOUBLE POINT 3X4	
154	3-735-025-01	GEAR, SKEW		164	*3-735-026-01	SPRING, COMPRESSION	
155	*1-630-094-11	CK-14 BOARD		165	X-3735-004-1	GUIDE ASSY, CENTER	
156	*A-6421-311-A	SV-33 BOARD, COMPLETE		166	4-606-833-01	SCREW (3X5), + PSW	
157	A-6415-290-A	MOTOR BLOCK ASSY, SKEW (M903)	152	167	1-574-648-11	CABLE, FLEXIBLE FLAT (24 CORE)	
158	1-554-468-00	SWITCH, LEAF (SLED IN LIMIT LD/CD) (S903)		168	3-899-248-01	SCREW (M3X6)	
159	1-541-776-11	MOTOR, LD SPINDLE (M901)		169	*3-737-413-01	SHEET, TEFLON	
160	*1-630-096-11	FG-13 BOARD		170	*3-735-099-01	SHEET, FLEXIBLE RETAINER	

5-5. MD CHASSIS ASSEMBLY (2)



No.	Part No.	Description	Remark	No.	Part No.	Description	Remark
201	X-3735-001-1	WIRE ASSY		208	△8-848-138-11	DEVICE, OPTICAL KHS-130A	
202	3-899-248-01	SCREW (M3X6)		209	3-735-016-01	PULLEY, DRIVING	
203	*X-3735-014-1	CHASSIS ASSY		210	3-735-015-01	GEAR, CARRIAGE	
204	1-570-771-21	SWITCH (SLED OUT LIMIT) (S902)		211	*3-735-020-01	SHAFT, CARRIAGE	
205	3-735-017-01	PULLEY, RETURN		212	3-672-430-00	SPRING, TENSION	
206	1-571-435-11	SWITCH (SLED IN LIMIT) (S901)		213	1-541-659-11	MOTOR, DC (SLED) (M902)	
207	*1-630-097-11	MT-28 BOARD		214	3-735-038-01	GEAR, WORM	

Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

<u>Ref.No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref.No</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
C145	1-163-103-00	CERAMIC CHIP 27PF	5%	50V	Q107	8-729-100-66	TRANSISTOR 2SC1623
C146	1-126-154-11	ELECT 47MF	20%	6.3V	Q108	8-729-216-22	TRANSISTOR 2SA1162
C147	1-126-154-11	ELECT 47MF	20%	6.3V	Q109	8-729-100-66	TRANSISTOR 2SC1623
C148	1-126-154-11	ELECT 47MF	20%	6.3V	Q110	8-729-100-66	TRANSISTOR 2SC1623
<u>CONNECTOR</u>				Q111	8-729-901-06	TRANSISTOR DTA144EK	
CN101	*1-566-709-11	CONNECTOR, BOARD TO BOARD 12P		Q112	8-729-901-01	TRANSISTOR DTC144EK	
<u>TRIMMER</u>				Q113	8-729-901-01	TRANSISTOR DTC144EK	
CV101	1-141-304-21	TRIMMER, CERAMIC 10PF		Q114	8-729-100-66	TRANSISTOR 2SC1623	
CV102	1-141-227-00	CAP, CERAMIC TRIMMER		Q115	8-729-216-22	TRANSISTOR 2SA1162	
<u>DIODE</u>				Q116	8-729-100-66	TRANSISTOR 2SC1623	
D101	8-719-911-19	DIODE 1SS119		Q117	8-729-100-66	TRANSISTOR 2SC1623	
D102	8-719-911-19	DIODE 1SS119		Q118	8-729-216-22	TRANSISTOR 2SA1162	
D103	8-719-911-19	DIODE 1SS119		Q119	8-729-100-66	TRANSISTOR 2SC1623	
D104	8-719-911-19	DIODE 1SS119		Q120	8-729-100-66	TRANSISTOR 2SC1623	
<u>DELAY LINE</u>				Q121	8-729-216-22	TRANSISTOR 2SA1162	
DL101	1-415-122-31	DELAY LINE, 1H (PAL)		Q122	8-729-100-66	TRANSISTOR 2SC1623	
DL102	1-415-640-11	DELAY LINE, LC		Q123	8-729-901-06	TRANSISTOR DTA144EK	
<u>FILTER</u>				Q124	8-729-100-66	TRANSISTOR 2SC1623	
FL101	1-235-753-21	YC MODULE		Q125	8-729-100-66	TRANSISTOR 2SC1623	
FL102	1-235-896-11	FILTER, BAND PASS		Q126	8-729-100-66	TRANSISTOR 2SC1623	
<u>IC</u>				<u>RESISTOR</u>			
IC101	8-752-006-12	IC CX20061		R101	1-216-073-00	METAL GLAZE 10K 5%	1/10W
IC102	8-752-006-12	IC CX20061		R102	1-216-085-00	METAL GLAZE 33K 5%	1/10W
IC103	8-752-030-75	IC V7020		R103	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
IC104	8-759-011-65	IC MC74HC4053F		R104	1-216-041-00	METAL GLAZE 470 5%	1/10W
IC105	1-464-932-21	FILTER BLOCK, COM (CFB-3)		R105	1-216-075-00	METAL GLAZE 12K 5%	1/10W
<u>JUMPER RESISTOR</u>				R106	1-216-073-00	METAL GLAZE 10K 5%	1/10W
JR104	1-216-295-00	METAL GLAZE 0 5% 1/10W		R107	1-216-049-00	METAL GLAZE 1K 5%	1/10W
<u>COIL</u>				R108	1-216-049-00	METAL GLAZE 1K 5%	1/10W
L101	1-408-407-00	INDUCTOR 6.8UH		R109	1-216-039-00	METAL GLAZE 390 5%	1/10W
L103	1-408-609-41	INDUCTOR 33UH		R110	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
L104	1-408-407-00	INDUCTOR 6.8UH		R111	1-216-073-00	METAL GLAZE 10K 5%	1/10W
L105	1-408-609-41	INDUCTOR 33UH		R112	1-216-073-00	METAL GLAZE 10K 5%	1/10W
<u>VARIABLE COIL</u>				R113	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
LV101	1-415-651-11	COIL (DELAY ADJUSTMENT)		R114	1-216-073-00	METAL GLAZE 10K 5%	1/10W
<u>TRANSISTOR</u>				R115	1-216-073-00	METAL GLAZE 10K 5%	1/10W
Q101	8-729-100-66	TRANSISTOR 2SC1623		R116	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
Q102	8-729-100-66	TRANSISTOR 2SC1623		R117	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q103	8-729-100-66	TRANSISTOR 2SC1623		R118	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
Q104	8-729-100-66	TRANSISTOR 2SC1623		R119	1-216-077-00	METAL GLAZE 15K 5%	1/10W
Q105	8-729-100-66	TRANSISTOR 2SC1623		R120	1-216-075-00	METAL GLAZE 12K 5%	1/10W
Q106	8-729-100-66	TRANSISTOR 2SC1623		R121	1-216-049-00	METAL GLAZE 1K 5%	1/10W
				R122	1-216-049-00	METAL GLAZE 1K 5%	1/10W
				R123	1-216-047-00	METAL GLAZE 820 5%	1/10W
				R124	1-216-049-00	METAL GLAZE 1K 5%	1/10W
				R125	1-216-047-00	METAL GLAZE 820 5%	1/10W
				R126	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
				R127	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
				R128	1-216-045-00	METAL GLAZE 680 5%	1/10W
				R129	1-216-047-00	METAL GLAZE 820 5%	1/10W
				R130	1-216-073-00	METAL GLAZE 10K 5%	1/10W
				R131	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
R132	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R133	1-216-111-00	METAL GLAZE 390K 5%	1/10W
R134	1-216-103-00	METAL GLAZE 180K 5%	1/10W
R135	1-216-047-00	METAL GLAZE 820 5%	1/10W
R136	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R137	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R138	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R139	1-216-039-00	METAL GLAZE 390 5%	1/10W
R140	1-216-039-00	METAL GLAZE 390 5%	1/10W
R141	1-216-047-00	METAL GLAZE 820 5%	1/10W
R142	1-216-047-00	METAL GLAZE 820 5%	1/10W
R143	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R144	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
R145	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R146	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R147	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R148	1-249-411-11	CARBON 330 5%	1/4W
R149	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R150	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R151	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R152	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R153	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R154	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R155	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R156	1-249-411-11	CARBON 330 5%	1/4W
R157	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R158	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R159	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R160	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R161	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R162	1-249-409-11	CARBON 220 5%	1/4W
R163	1-216-021-00	METAL GLAZE 68 5%	1/10W
R164	1-216-021-00	METAL GLAZE 68 5%	1/10W
R165	1-216-021-00	METAL GLAZE 68 5%	1/10W
R166	1-216-045-00	METAL GLAZE 680 5%	1/10W
R167	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R168	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R169	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R170	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R171	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R172	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R173	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R174	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R175	1-216-043-00	METAL GLAZE 560 5%	1/10W
R176	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R177	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R178	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R179	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R180	1-212-863-00	FUSIBLE 18 5%	1/4W F
R181	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R182	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R183	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R184	1-216-075-00	METAL GLAZE 12K 5%	1/10W

Ref.No	Part No.	Description	Remark
R185	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R186	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R187	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R188	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R189	1-216-295-00	METAL GLAZE 0 5%	1/10W
R190	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R191	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R192	1-216-041-00	METAL GLAZE 470 5%	1/10W
R193	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R194	1-216-023-00	METAL GLAZE 82 5%	1/10W

VARIABLE RESISTOR

RV101	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV102	1-228-989-00	RES, ADJ, CARBON 470	
RV103	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV104	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV105	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV106	1-228-991-00	RES, ADJ, CARBON 2.2K	
RV107	1-228-994-00	RES, ADJ, CARBON 10K	
RV108	1-228-989-00	RES, ADJ, METAL GLAZE 470	
RV109	1-228-990-00	RES, ADJ, METAL GLAZE 1K	
RV110	1-228-989-00	RES, ADJ, CARBON 470	

RV111	1-228-989-00	RES, ADJ, CARBON 470	
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CRYSTAL

X101	1-567-504-11	OSCILLATOR, CRYSTAL (4.43MHZ)	
X102	1-567-505-11	OSCILLATOR, CRYSTAL (3.58MHZ)	

*A-6421-503-A FP-356(D) BOARD, COMPLETE (MDP-533D)

*A-6421-499-A FP-356(P) BOARD, COMPLETE (MDP-333)

*3-746-508-01 HOLDER, FLD

CAPACITOR

C001	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V
C004	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C005	1-126-157-11	ELECT 10MF	20%	16V
C006	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C007	1-126-157-11	ELECT 10MF	20%	16V
C008	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C009	1-126-157-11	ELECT 10MF	20%	16V
C010	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C011	1-163-075-00	CERAMIC CHIP 0.047MF	10%	25V

CONNECTOR

CN001	1-506-469-11	PIN, CONNECTOR 4P	
CN002	1-506-470-11	PIN, CONNECTOR 5P	
CN003	1-506-472-11	PIN, CONNECTOR 7P	
CN004	1-506-472-11	PIN, CONNECTOR 7P	

IC

IC001	8-752-816-39	IC CXP50116-072Q	
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When indicating parts by reference number, please include the board name.

FP-356

LS-32

SW-163

SW-164

Ref.No	Part No.	Description	Remark
IC002	8-759-605-21	IC M51953AFP	
IC003	8-741-138-78	IC BX-1453	
<u>JUMPER RESISTOR</u>			
JR001	1-216-296-00	METAL GLAZE	0 5% 1/8W
<u>COIL</u>			
L001	1-407-169-XX	INDUCTOR	100UH
L002	1-407-169-XX	INDUCTOR	100UH
<u>INDICATOR TUBE</u>			
ND001	1-519-511-11	INDICATOR TUBE, FLUORESCENT	
<u>TRANSISTOR</u>			
Q001	8-729-100-67	TRANSISTOR 2SC1623-L7	
Q002	8-729-100-67	TRANSISTOR 2SC1623-L7	
<u>RESISTOR</u>			
R001	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R002	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R003	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R004	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R005	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R006	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R007	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R008	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R009	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R010	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R011	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R012	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R013	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R014	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R015	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R016	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R017	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R018	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R019	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R020	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R021	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R022	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R023	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R024	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R025	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R026	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R027	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R028	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R029	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R030	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R031	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R032	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R033	1-216-121-00	METAL GLAZE	1M 5% 1/10W

Ref.No	Part No.	Description	Remark
<u>SWITCH</u>			
S001	1-571-977-11	SWITCH, TACTIL (1)	
S002	1-571-977-11	SWITCH, TACTIL (2)	
S003	1-571-977-11	SWITCH, TACTIL (3)	
S004	1-571-977-11	SWITCH, TACTIL (4)	
S005	1-571-977-11	SWITCH, TACTIL (5)	
S006	1-571-977-11	SWITCH, TACTIL (6)	
S007	1-571-977-11	SWITCH, TACTIL (7)	
S008	1-571-977-11	SWITCH, TACTIL (8)	
S009	1-571-977-11	SWITCH, TACTIL (9)	
S010	1-571-977-11	SWITCH, TACTIL (0)	
S011	1-571-977-11	SWITCH, TACTIL (+10)	
S012	1-571-977-11	SWITCH, TACTIL (AUTO PGM)	
S013	1-571-977-11	SWITCH, TACTIL (AV TIME)	
S014	1-571-977-11	SWITCH, TACTIL (FILE)	
S015	1-571-977-11	SWITCH, TACTIL (CUSTOM INDEX)	
S016	1-571-758-11	SWITCH, PUSH (1 KEY)	
<u>CRYSTAL</u>			
X001	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	

	*1-636-185-11	LS-32 BOARD	*****
	3-735-054-01	HOLDER, SENSOR	
<u>DIODE</u>			
D201	8-719-941-81	DIODE GL360	
<u>TRANSISTOR</u>			
Q201	8-729-904-10	TRANSISTOR PT360FS	

	*1-636-183-11	SW-163 BOARD	*****
<u>CONNECTOR</u>			
CN301	1-506-467-11	PIN, CONNECTOR 2P	
<u>SWITCH</u>			
S301	1-554-655-00	SWITCH, LEAF	

	*1-636-184-11	SW-164 BOARD	*****
<u>CONNECTOR</u>			
CN401	1-506-481-11	PIN, CONNECTOR 2P	

When indicating parts by reference number, please include the board name.

SW-164

MP-31

Ref.No	Part No.	Description	Remark
<u>RESISTOR</u>			
R401	1-249-423-11	CARBON 3.3K 5% 1/4W	
R402	1-249-417-11	CARBON 1K 5% 1/4W	
<u>SWITCH</u>			
S401	1-571-300-11	SWITCH, ROTARY	

	*A-6421-498-A	MP-31(P) BOARD, COMPLETE (MDP-333)	
	*A-6421-501-A	MP-31(D) BOARD, COMPLETE (MDP-533D)	

C310	1-164-232-11	CERAMIC CHIP 0.01MF 50V	
C311	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C312	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C313	1-124-443-00	ELECT 100MF 20% 10V	
CN604	1-506-484-11	PIN, CONNECTOR 5P	
CN605	1-506-486-11	PIN, CONNECTOR 7P	
L125	1-408-421-00	INDUCTOR 100UH	
Q170	8-729-216-22	TRANSISTOR 2SA1162	
Q171	8-729-100-66	TRANSISTOR 2SC1623	
Q172	8-729-100-66	TRANSISTOR 2SC1623	
R370	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R371	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R372	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R373	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R374	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R375	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R376	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R377	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
S601	1-571-588-11	SWITCH, SLIDE (REPEAT)	

<u>MISCELLANEOUS</u>			

	1-161-063-00	CAP, CERAMIC 0.1MF X	
	△ 1-551-908-61	CORD, POWER, EULO PLUG	
	1-161-063-00	CAP, CERAMIC 0.1MF X	
	△ 1-551-884-32	CORD, POWER (AUSTRALIAN MODEL)	
	△ 1-551-908-61	CORD, POWER, EULO PLUG (AEP MODEL)	
	1-551-086-31	CORD, CONNECTION (AUSTRALIAN MODEL) (1 PHONO TO 1 PHONO VIDEO)	
	1-559-533-11	CORD, CONNECTION (AUSTRALIAN MODEL) (2 PHONO TO 2 PHONO AUDIO)	
	1-574-648-11	CABLE, FLEXIBLE FLAT (24 CORE)	
	*1-574-755-11	WIRE, FLAT TYPE 28P	
	8-759-604-47	IC M5F7905L	
	△ 8-848-138-11	DEVICE, OPTICAL KHS-130A	
M901	1-541-776-11	MOTOR, LD SPINDLE	
M902	1-541-659-11	MOTOR, DC (SLED) (M902)	
M903	A-6415-290-A	MOTOR BLOCK ASSY, SKEW	
S901	1-571-435-11	SWITCH (SLED IN LIMIT)	
S902	1-570-771-21	SWITCH (SLED OUT LIMIT)	
S903	1-554-468-00	SWITCH, LEAF (SLED IN LIMIT LD/CD)	
T401	△ 1-449-849-11	TRANSFORMER, POWER	

Ref.No	Part No.	Description	Remark
<u>ACCESSORIES AND PACKING MATERIALS</u>			

	Part No.	Description	Remark
	1-465-496-31	REMOTE COMMANDER (RMT-333E)	
	*3-710-964-01	SHEET, PROTECTION	
	*3-746-513-01	CUSHION (UPPER)	
	*3-746-514-01	CUSHION (LOWER)	
	*3-746-517-21	INDIVIDUAL CARTON (MDP-333)	
	*3-746-517-31	INDIVIDUAL CARTON (MDP-533D)	
	3-751-824-11	MANUAL, INSTRUCTION (ENGLISH) (MDP-333)	
	3-751-824-41	MANUAL, INSTRUCTION (FRENCH/SPANISH/ GERMAN/PORTUGUESE) (MDP-333)	
	3-752-307-11	MANUAL, INSTRUCTION (ENGLISH) (MDP-533D)	
	3-752-307-41	MANUAL, INSTRUCTION (FRENCH/SPANISH/ GERMAN/PORTUGUESE) (MDP-533D)	

<u>HARDWARE LIST</u>			

<u>SCREW</u>			
	7-621-255-55	SCREW +P 2X8	
	7-682-645-01	SCREW +PS 3X4	
	7-685-646-79	SCREW +P 3X8 TYPE2 NON-SLIT	
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
	7-685-649-79	SCREW +BVTP 3X14 TYPE2 IT-3	
	7-685-661-79	SCREW +BVTP 4X12 TYPE2 SLIT	
	7-685-870-01	SCREW +BVTT 3X5 (S)	
<u>WASHER</u>			
	7-623-423-07	LW 4, TYPE B	
<u>STOP RING</u>			
	7-624-108-04	STOP RING 4.0, TYPE -E	
	7-624-190-81	STOP RING 2, TYPE-CS	

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.